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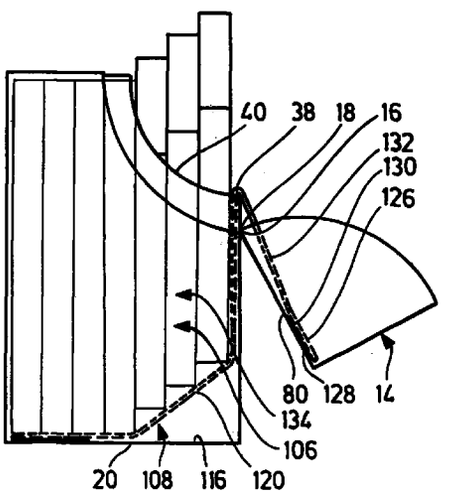
(54) Cigarette package having a lifting device

(57) A package for smoking articles said package comprising a body portion (12) including a bottom (20) and at least two walls (22,24), said body portion being provided with an opening (34); and a lid portion (14) hingedly connected to said body portion and moveable between a closing position and an open position, is improved with respect to access to said articles (106) by providing a lifting device (108) for lifting articles arranged in a lifting zone, said lifting device comprising an article lifter (120) arranged within said body portion adjacent to said lifting zone (134), said article lifter being moveable between an inactive position and an active position, for presenting said articles arranged in said lifting zone in an easy access position.

FIG.4



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Description

[0001] The present invention relates to a package for smoking articles or articles with a similar elongated shape.

[0002] Popular smoking articles, such as cigarettes, conventionally have been sold in packages. Typically, each package contains about 20 or about 25 cigarettes.

[0003] One type of popular cigarette package is the so-called "hard pack", "crush proof box" or "hinged lid package". Such a package has a generally cuboid-type shape and is manufactured from resilient paperboard, and preferably includes an outer wrap of transparent polypropylene film.

[0004] Hinged lid cigarette packages, for example, are known from US patent No. 4,852,734 to Allen at al. or US patent No. 3,874,581 to Fox, et al. or 3,944,066 to Niepmann, and 5,139,140 to Burrows et al.

[0005] Cigarettes are removed from the so-called "hinged lid packages" by rotating the lid about its hinge such that a lid does not cover an opening of the cigarette package anymore and cigarettes arranged in this opening can be accessed. Preferably, the opening is arranged such that those cigarettes arranged in the opening can be accessed by gripping them at the portion of their envelope.

[0006] Cigarettes can also be packaged in a container having the form of a so-called "soft pack". See, for example, US patent Nos. 3,695,422 to Tripadi, 4,717,017 to Sprinkel, Jr. et al. and 5,333,729 to Wolfe Cigarettes are removed from a soft package by tearing away a portion of the top of the package, in order that cigarettes can be easily accessed from the top of the package by gripping them at a portion of their envelope.

[0007] In both kinds of packages the "hinged lid package" and the "soft pack" access to the cigarettes is difficult in particular since in a full package the cigarettes are tightly packed and, therefore, friction between the cigarettes makes it difficult to pull out one cigarette and to leave the other ones in the package.

[0008] It is the object of the invention to provide a cigarette package which allows easy access to the cigarettes arranged in the area of the opening even in the case of a full package.

[0009] This object is solved by a package for smoking articles or articles with a similar elongated shape, said package comprising a body portion including a bottom and at least two walls extending from said bottom, said body portion being provided with an opening, said body portion enclosing an inner space for receiving said articles, said inner space comprising a removal zone extending from said bottom to said opening, and a lid portion hingedly connected to said body portion, said lid portion being moveable between a closing position in which said lid portion covers said opening and an open position in which said opening is uncovered, wherein in accordance with the present invention said package comprises a lifting device for lifting articles arranged in a lifting zone, said lifting device comprising an article lifter arranged within said body portion adjacent to said lifting zone, said article lifter being moveable between an inactive position in which said article lifter is arranged close to said bottom of said body portion and an active position in which said article lifter is arranged at a distance from said bottom which is greater than the distance of said article lifter in said inactive position, for presenting said articles arranged in said lifting zone in an easy access position.

[0010] The advantage of the present invention is that the lifting device now makes it possible to lift smoking articles arranged within a lifting zone with respect to other smoking articles in that package by actuating the lifting device so that these smoking articles are brought into an easy access position in which the smoking articles can be gripped with two fingers on both sides of their envelope and, therefore, be easily removed from the package.

[0011] This is a remarkable advantage with respect to solutions known from the prior art because the comfort in handling smoking articles arranged in such a package is greatly enhanced.

[0012] In connection with the aforementioned inventive concept it is not disclosed in detail how the article lifter is to be moved, in particular due to the fact that the article lifter has to be arranged within said body portion and, therefore, means for enabling movement of said article lifter have to be provided.

[0013] For this reason one advantageous embodiment of the package according to the present invention comprises an actuating element connected to said article lifter for moving said article lifter from said inactive position into said active position.

[0014] Said actuating element can in fact be made of any design suitable for moving said article lifter.

[0015] According to a technically simple and inexpensive embodiment said actuating element is comprised of a lifting strip.

[0016] Said lifting strip can, for example, be arranged in any way in said body portion. For instance, a separate opening for said lifting strip can be provided in said body portion.

[0017] An embodiment of the inventive package which can be technically easily realized provides that said lifting strip comprises a pulling section extending from said article lifter through said opening and having an end piece arranged outside said body portion.

[0018] Such a design of a lifting strip would make it possible to have said end piece of said lifting strip simply protruding beyond said opening of said body portion so that to bring said lid portion into its open position a user of said package could grip said end piece and pull said pulling section.

[0019] A more sophisticated solution which is also more easy to handle provides that said pulling section extends via a guide element arranged at said body portion to said end piece fixed to said lid portion, said end

piece in said closing position of said lid portion being arranged closer to said guide element than in said open position of said lid portion.

[0020] This design enables use of the movement of the lid portion between its closed position and its opened position to effect a pulling action on said pulling section so as to actuate said article lifter.

[0021] Said guide element can now be designed in any appropriate manner. For example, said guide element can be a separate element only arranged for guiding said lifting strip. In an advantageous embodiment said guide element is arranged at a distance from an axis of rotation of said hinge so that movement of said lid portion from its closing position to its open position can be easily used for obtaining said pulling action.

[0022] One embodiment which is of very simple design provides that said guide element is supported by one of said side walls supporting said hinge so that the guide element can be easily obtained when manufacturing said respective side wall.

[0023] An advantageous solution provides that said guide element is formed by a rim of said opening.

[0024] Said rim of said opening can be realized in different ways. For example, said rim can be a rim of an outer wall of said side wall itself. An advantageous embodiment provides that said rim of said opening is formed by a collar of said body portion. This solution makes it possible to manufacture said hinge for said lid portion in a conventional manner, for instance, by a fold or any other well-known design for so-called "hinged lid packages".

[0025] A design which can be easily manufactured similar to the designs known from the prior art provides that said collar extends beyond edges of said body portion provided for abutment of corresponding edges in said closing position of said lid portion.

[0026] In all embodiments discussed above it is not specified how the lifting strip has to be further designed or arranged within said body portion. In this respect, various solutions are possible.

[0027] One advantageous solution provides that said lifting strip comprises a fastening section extending in said inner space outside said lifting zone and being fixed to said body portion.

[0028] Such a design enables easy realization of a lifting action of said lifting strip if said pulling section of said lifting strip is subjected to a pulling action.

[0029] However, said fastening section can be fixed to any part of said body portion. For example, it would be possible to fix said fastening section close to an opposite side of said opening or close to any side wall of said body portion.

[0030] One advantageous embodiment, which is in particular advantageous for filling said cigarette package, provides that said fastening section is fixed to said bottom of said body portion.

[0031] With respect to the function of said lifting strip it has not been specified above how said lifting strip can be arranged within a package according to the present invention for acting on said article lifter.

[0032] One advantageous embodiment provides that said lifting strip comprises a lifting section arranged between said fastening section and said pulling section. Said lifting section can then act on an article lifter provided in said body portion.

[0033] However, an even more simple design provides that said lifting section forms said article lifter itself, so that simply part of said lifting strip acts on smoking articles arranged in said lifting zone for moving the smoking articles into said easy access position.

[0034] Embodiments discussed above and referring to the provision of a lifting strip for actuating said article lifter provide a very comfortable solution for a user of a package according to the present invention.

[0035] Another embodiment of the present invention comprises a manually pushable push element acting on said article lifter and being arranged within said body portion close to said bottom and an access opening in said body portion giving manual access to said push element. This embodiment, therefore, does not need a lifting strip due to the fact that a direct manual action on said push element through said access opening in said body portion is possible.

[0036] For giving easy access to said push element one embodiment according to the present invention provides that said access opening comprises a bottom opening in said bottom and an adjacent opening arranged in a front wall of said body portion adjacent said bottom. This kind of access opening makes it easy to act on the push element from outside said body portion.

[0037] To avoid any misalignment of said push element within said body portion it is advantageous for said push element to be guided by opposite walls of said body portion.

[0038] An advantageous embodiment of the push element according to the present invention comprises a base element and at least one guide element arranged in sliding abutment with a guide surface of at least one of said opposite walls.

[0039] For providing easy manual access to said push element in an advantageous embodiment said base element and said guide element in sliding abutment with said guide surface are arranged to cover said access opening in an inactive position of said push element.

[0040] An embodiment which is easy to manufacture is designed such that said push element forms an insert arranged in said body portion.

[0041] Such an insert can be designed in different ways. For example, the insert can be an insert made of flexible material which can also be an inner liner of said package.

[0042] However, it is also possible to provide an insert representing said push element which is different from an inner liner of said package. One such insert is preferably designed such that said push element with said

base element and said guide elements forms a U-shaped part which is separately inserted into said body portion.

[0043] One advantageous embodiment provides that said base element is said article lifter. Such an embodiment is very simple with respect to its design and very inexpensive to manufacture.

[0044] When explaining the various embodiments of the present invention the design of the package itself has not been specified in greater detail above. One advantageous design of the package provides the design as known from conventional hinged lid packages as known from prior art mentioned in the introductory portion. This design is further supplemented by features necessary for realizing the present invention.

[0045] Another advantageous design according to the present invention provides that said body portion comprises at least two walls extending between said bottom and the top wall and at least one side opening. Such a side opening enables the user to feed the articles in a direction transverse to their elongated shape towards the opening of the body portion because such a side opening is usually arranged in areas of said body portion outside said removal zone defined by said opening.

[0046] Preferably said side opening extends between said bottom and said top wall.

[0047] For feeding cigarettes into said body portion via the side opening various solutions are possible.

[0048] One advantageous solution provides that said body portion receives an insert portion limiting said inner space in a region of said side opening.

[0049] For increasing the volume of the package it is provided that said insert portion in its initial position extends beyond said side opening with a maximum extent and is movable towards positions having reduced extent. This solution provides maximum space for storing smoking articles in the package when it is full and also enables reduction of the volume if smoking articles are removed from said package.

[0050] Said insert portion can be made of various materials. In one advantageous solution the insert portion is of stiff material, preferably of material similar to the material used for manufacturing said body portion. An advantageous material is flexible paperboard material already used for all kinds of so-called "hard packs".

[0051] An advantageous design of such a package provides that said insert portion is a drawer-like supplementary body portion movable with respect to said body portion. With this embodiment the insert portion can be moved into said body portion for reducing the volume for smoking articles when smoking articles are removed from said package.

[0052] To avoid loss of said insert portion, in a preferred embodiment said supplementary body portion and said body portion are provided with cooperating stop elements defining said maximum extent in said initial position and allowing movement towards positions having reduced extent.

[0053] As an alternative to an insert portion made of stiff material, another solution provides that said insert portion is a flexible material, that said insert portion has an initial shape defining a maximum extent beyond said side opening, that said shape is changeable by deformation of said flexible material so as to obtain a reduced extent beyond said side opening of said insert portion. With such a solution, which is of the type of a so-called "soft pack", it is easy to reduce the volume of said insert portion and, in addition, said insert portion is inexpensive to manufacture.

[0054] One preferred embodiment provides that said insert portion is an inner liner arranged within said body portion and comprises pockets which are arranged in opposite side openings and which in the initial position extend beyond said side openings. By using two side openings, this solution provides a maximum volume for the full package and also enables those parts which are made of stiff material to have minimum extent.

[0055] Further features of the inventive concept and further explanations thereof are the subject matter of the following detailed specification relating to various embodiments of the present invention.

[0056] In the drawings:

Fig. 1 shows a perspective schematic representation of a first embodiment of a package according to the present invention with a lid portion in its closing position;

Fig. 2 shows the schematic representation according to Fig. 1 with the lid portion in its open position;

Fig. 3 shows a front view of a package according to the present invention with removed front wall, said package being completely filled with cigarettes and the lid portion being in its closing position;

Fig. 4 shows the same front view as Fig. 3 but with the lid portion in its open position;

Fig. 5 shows a second embodiment of a package according to the present invention with a body portion and a supplementary body portion in its disassembled position;

Fig. 6 shows a schematic representation of the body portion and the supplementary body portion with front walls removed in its assembled position having maximum volume for storing cigarettes;

Fig. 7 shows a schematic representation similar to Fig.6 in which said supplementary body portion is moved into said body portion into a position having minimum extent;

Fig. 8 shows a perspective schematic representation of a third embodiment having its lid portion in its open position and a push element in its inactive position;

Fig. 9 shows a representation of the third embodiment of Fig. 8 but with said push element in its active position;

Fig. 10 shows a perspective representation of said third embodiment with partially removed lid portion and body portion from a rear side with the lid portion in its closing position;

Fig. 11 shows the schematic representation of the third embodiment similar to Fig. 10 but with the lid portion in its open position;

Fig. 12 shows a schematic representation of a fourth embodiment of a package according to the present invention with a lid portion in its open position and a push element in its inactive position;

Fig. 13 shows a schematic representation of the fourth embodiment similar to Fig. 12 with the push element in its active position;

Fig. 14 shows a perspective view of the rear wall of the fourth embodiment with the lid portion in its closing position; and

Fig. 15 shows a perspective view of the package similar to Fig. 14 with the lid portion in its open position.

[0057] A first embodiment of a package for a smoking article or articles with similar elongated shape is of the type of a so-called "hard pack", "crush proof box" or "hinged lid package". Such a package has a generally cuboid-type shape and is manufactured from resilient paperboard.

[0058] The first embodiment of such a package for a smoking article, provided as a whole with reference number 10, comprises a body portion 12 and a lid portion 14 which is connected by a hinge 16 to body portion 12, said hinge 16 defining an axis of rotation 18 about which lid portion 14 is rotatable with respect to body portion 12.

[0059] Body portion 12 comprises a bottom wall 20 from which a front wall 22 and a rear wall 24 extend towards a top wall 26. In addition, a side wall 28 arranged opposite to hinge 16 extends from bottom 20 to top wall 26. A side wall 30 arranged on a side of bottom 20 opposite to side wall 28 extends from bottom to hinge 16.

[0060] Side wall 28 and top wall 26 with their line of contact form an upper corner 32 of body portion 12 whereas body portion 12 has no upper corner opposite to upper corner 32 due to the fact that body portion 12 is provided with an opening in a corner region opposite to upper corner 32.

[0061] Top wall 26 extends from upper corner 32 over a limited distance and on its side opposite to upper corner 32 shows an edge 36 which defines a rim section of said opening.

[0062] In addition, side wall 30 extends from bottom wall 20 towards hinge 16 and beyond hinge 16 up to an edge 38 which defines a rim portion of said opening.

[0063] Both front walls 22 and 24 are provided with curved edges 42 and 44, respectively, said curved edges 42 and 44 defining further rim portions of opening 34.

[0064] All rim portions 36, 38, 42 and 44 together form a rim 40 which encloses said opening 34.

[0065] Preferably rim 40 is defined by a collar 46 formed by an inner side wall 50 of said side wall 30, an inner front wall 52 of said front wall 22, an inner rear wall of said rear wall 24 and an inner top wall 56 of top wall 26, all extending beyond outer walls of said aforementioned walls, in particular an outer side wall 60 of side wall 30, an outer front wall 62 of front wall 22, an outer rear wall of rear wall 24 and an outer top wall 66 of top wall 26, whereas outer top wall 66 extends to an edge 76 arranged at a certain distance from edge 36, whereas edge 72 of outer front wall 62 and a corresponding edge of said outer rear wall extend between edge 76 and said axis of rotation 18 at a certain distance from edges 42 and 44.

[0066] Side wall 30 of body portion 12 only extends up to axis of rotation 18 of hinge 16 and is made of a strip of paperboard folded along axis of rotation 18 and continuing beyond axis of rotation 18 as side wall 80 of lid portion 14. Lid portion 14 further comprises a front wall 82 and a rear wall 84 as well as a top wall 86. Said top wall 86 together with said side wall 18 forms an upper corner of 88 of said package which in a closed position of lid portion 14 is arranged opposite to upper corner 32.

[0067] Front wall 82, rear wall 84 and top wall 86 all have edges 92, 94 and 96, respectively, which in the closed position of lid portion 14 are located adjacent or in abutting relationship with edge 72 of outer front wall 22, said corresponding edge of outer rear wall 24 and edge 76 of outer top wall 66.

[0068] Body portion 12 comprises an inner space 100 for receiving smoking articles, in particular cigarettes 102, or other articles with a similar elongated form, which with their longitudinal axis 104 extend parallel to side walls 28 and 30.

[0069] As shown in Fig. 3 and 4 those cigarettes 102a which are accessible when lid portion 14 is in its open position, as shown in Fig. 4, are arranged in a removal zone 106 of inner space 100, removal zone 106 extending from bottom wall 20 towards opening 34 of body portion 12.

[0070] Cigarette package 10 is further provided with a

lifting device 108 comprising a lifting strip 110 which comprises a fastening section 112 extending outside removal region 106 of inner space 100 and being fixed to bottom wall 20 by a spot 114 of adhesive or any other fixing element.

[0071] Adhesive spot 114 fixing fastening section 112 to bottom wall 20 is preferably arranged close or adjacent to side wall 28 on an inner surface 116 of bottom wall 20 in this area.

[0072] Lifting strip 110 extends from adhesive spot 114 with fastening section 112 towards side wall 30 and comprises a lifting section 120 which in its inactive position extends on inner side 116 of bottom wall 20 up to side wall 30.

[0073] Lifting section 120 is further followed by pulling section 122 of lifting strip 110 which extends along an inner side 124 of side wall 30 up to hinge 16 and beyond edge 38 into lid portion 14 and is preferably fixed to side wall 80 of lid portion 14 in an area close to or adjacent top wall 86 of lid portion 14. Pulling section 122 comprises an end piece 126 which with a spot 128 of adhesive is fixed to inner side 130 of side wall 80. Between spot 128 of adhesive and hinge 16 pulling section 122 has the ability to extend close to inner side 130 of side wall 80 or in a raised position with respect to inner side 130.

[0074] As shown in Fig. 3 in said closing position of lid portion 14 pulling section 122 extends adjacent and along inner side 130 of side wall 80 of hinge 14 but as soon as lid portion 14 is rotated about said axis of rotation 18 said pulling section 122 is guided by edge 38 of rim 40 and due to a distance between edge 38 and hinge 16 a portion 132 of pulling section 122 extending between edge 38 and end piece 126 is longer in said open position of said lid portion 14 (Fig. 4) than in that closing position (Fig. 3). Consequently, a movement of lid portion 14 from its closing position towards its open position leads to a pulling action of pulling section 122 on lifting section 120 so that lifting section 120 is raised above inner side 116 of bottom wall 20 into its active position as shown in Fig. 4.

[0075] If lifting section 120 itself represents an article lifter or acts on a separate article lifter, as is also possible, those smoking articles 102a which are arranged above lifting section 120 within a lifting zone 134 of removal zone 106 will be lifted from bottom wall 20 and therefore extend through opening 34 in an easy accessed position as shown in Fig. 4.

[0076] Due to the fact that the smoking articles 102 arranged outside removal zone 106 approximately extend from lifting strip 110 towards top wall 26 these cigarettes 102 will maintain fastening section 112 extending from spot 114 of adhesive towards side wall 30 close to inner side 116 of bottom wall 120 so that only lifting strip 110 as far as it extends through removal zone 106 with lifting section 120 will have the ability to be moved from its inactive position in abutment with or adjacent bottom wall 20 to its active position in which lifting section 120 preferably with decreasing distance from side wall 30 extends with increasing distance from bottom wall 20 due to said pulling action on pulling section 122 occurring when lid portion 14 is moved from its closing position into its open position.

[0077] In a second embodiment as shown in Figs. 5 to 6 body portion 12' is designed similar to body portion 12 according to the first embodiment except that body portion 12' does not comprise side wall 28.

[0078] In addition, lid portion 14 in the second embodiment is designed in an identical manner with lid portion 14 of the first embodiment so that with respect to arrangement and function of lid portion 14 reference is made to explanations thereof given in connection with the first embodiment.

[0079] Instead of side wall 28 body portion 12' comprises a side opening 140 in which a drawer-like supplementary body portion 150 extends. Said drawer-like supplementary body portion 150 comprises, as shown in Fig. 5, a bottom wall 160, a front wall 162 and a rear wall 164 as well as a side wall 168 and a side opening 170 arranged opposite to side wall 168 at said supplementary body portion 150 and facing side wall 30 of body portion 12', when assembled with body portion 12'.

[0080] Supplementary body portion 150 with part of its front wall 162 and part of its rear wall 164 extends inside body portion 12' in sliding abutment with inner sides 174 of said front wall 22 and said rear wall 24.

[0081] In addition, also bottom wall 160 extends parallel to bottom wall 20 but preferably in sliding abutment on lifting strip 110, in particular fastening section 112 thereof.

[0082] Further, top wall 166 of supplementary body portion 150 extends in sliding abutment on inner side 176 of top wall 26.

[0083] In its assembled condition supplementary body portion 150 can be arranged in a maximum extending position, as shown in Fig. 6, and can be moved with respect to body portion 12' into position having reduced extent. (Fig. 7)

[0084] The maximum extended position of supplementary body portion 150 is defined by stop elements 180 arranged at supplementary body portion 150 and stop elements 182 arranged at body portion 12'.

[0085] Each of stop elements 182 is preferably designed as a tongue 184 extending in direction 186 from side wall 30 towards opening 140 and having at its end extensions 188 and 190 extending transversely to direction 186 towards bottom wall 20 and top wall 26 beyond tongue 184 thereby forming with tongue 184 a T-shaped stop element 182.

[0086] Preferably T-shaped stop elements 182 are formed by a flap manufactured integrally with inner front wall 52 and the corresponding inner rear wall and folded so as to extend from side wall 30 towards opening 140.

[0087] Stop elements 180 comprise flap hooks 192 and 194 which are preferably manufactured as integral

flap portions of front wall 162 and rear wall 164, respectively, and extend from side opening 170 towards side wall 160 of supplementary body portion 150 on an inner side of front wall 162 and rear wall 164. Flap hooks 192 and 194 are arranged such that extensions 188 and 190 can extend between said flap hooks 192 and 194 and said respective rear wall 164 or front wall 162 of said supplementary body portion 150 so that the maximum extended position of supplementary body portion 150 is defined by a position in which extensions 188 and 190 of step elements 182 are in contact with bent portions 196 and 198 of flap hooks 192 and 194, said bent portions 196 and 198 being arranged adjacent side opening 170 of supplementary body portion 150.

[0088] An inner space 200 arranged within body portion 12' and supplementary body portion 150 can now receive smoking articles 102 as described in connection with the first embodiment.

[0089] The entire inner space 200 having its maximum volume at the maximum extended position of supplementary body portion 150 can be reduced in volume by moving supplementary body portion 150 into body portion 12' in a drawer-like manner and thereby pushing smoking articles 102 into removal zone 106 for removal.

[0090] All smoking articles 102a which are arranged in lifting zone 134 can now be brought into their easy access position, as shown in Fig. 7, by rotating lid portion 14 from its closing position shown in Fig. 6 towards its open position shown in Fig. 7 so as to raise lifting strip 110 with its lifting section 120 above bottom wall 20 as described in connection with the first embodiment.

[0091] In a third embodiment as shown in Figs. 8 to 11 said package 210 comprises a body portion 212 and a lid portion 214 which is connected to said body portion 212 by a hinge 216 defining an axis of rotation 218.

[0092] The package according to the third embodiment is also designed as a so-called "hard pack", "crush proof box" or "hinged lid package" manufactured from resilient paperboard.

[0093] Body portion 212 comprises a bottom wall 220, a front wall 222 and a rear wall 224 as well as side walls 228 and 230 arranged on opposite sides of said bottom wall 220 and extending between front wall 222 and rear wall 224.

[0094] Front wall 222 comprises an outer front wall 232 which extends up to an upper edge 242. In the same manner side walls 228 and 230 comprise outer side walls 238 and 240 which extend up to upper edges 248 and 250.

[0095] Front wall 222 also comprises an inner front wall 252 and side walls 228 and 230 comprise inner side walls 258 and 260 which are fixed to outer walls 232, 238 and 240 by a glue or any other suitable manner and extend beyond edges 242, 248 and 250 thereof. In addition, rear wall 224 is also provided with an inner rear wall 254 which extends beyond hinge 216. Said inner walls 252, 254, 258 and 260 with their portions extending beyond edges 242, 248 and 250 and beyond hinge 216 form a collar 270 which has an upper rim 272 defined by edges 282, 284, 288 and 290 of inner walls 252, 254, 258 and 260.

[0096] Rim 272 encloses an upper opening 274 which allows removal of smoking articles 280 arranged in an inner space 300 of said body portion 212.

[0097] Lid portion 214 comprises, as shown in Figs. 8 and 9 as well as in Figs. 10 and 11, a front wall 302, a rear wall 304, which together with an outer side wall 234 forms an integral part and is rotatable about axis of rotation 218 which is defined by a fold or a similar element.

[0098] Lid portion 214 further comprises side walls 308 and 310 and a top wall 316 connected to front wall 302, rear wall 304 and side walls 308 and 310. Said front wall 302 and said side walls 308 and 310 extending from top wall 316 are provided with edges 322, 328 and 330 which in said closing position of lid portion 214 are arranged adjacent or in abutment with edges 242, 248 and 250 of outer walls 232, 238 and 240.

[0099] In its open position lid portion 214 gives free access to opening 274.

[0100] For maintaining lid portion 214 in its open position rear wall 304 comprises a lip section 334 extending towards a side of said axis of rotation 218 opposite to rear wall 304 and during rotation of lid portion 214 from its closing position shown in Fig. 10, into its open position shown in Fig. 11, pressing against inner rear wall 254 thereby moving rear wall 254, made of resilient paperboard, away from outer rear wall 234 until lid portion 214 with rear wall 304 reaches its open position in which rear wall 304 and rear wall 234 define an acute angle with respect to each other.

[0101] In this position lip section 334 prevents lid portion 214 from moving from its opened position towards its closing position.

[0102] Preferably lip section 334 is manufactured by providing hinge sections 216a on outer sides of said rear walls 234 and 304 close to said respective side walls 228 and 308 or 230 and 310, respectively, and interrupting said hinge between hinge sections 216a by performing a cut along a U-shaped cut line 336 between rear wall 304 and rear wall 234, said cut line 336 extending beyond axis of rotation 218 on a side of rear wall 234 so that between cut line 236 and axis of rotation 218 lip section 334 results and forms an integral part of rear wall 304.

[0103] Said package according to said third embodiment is provided with a lifting device 338 different from lifting device 108 according to said first and second embodiments.

[0104] Bottom wall 220 is further provided with a recess 340 extending from an edge line 344, formed between bottom wall 220 and front wall 222, in said bottom wall 220 towards rear wall 224 but with a limited extent so that recess 340 does not extend over the entire bottom wall 220 between front wall 222 and rear wall 224.

[0105] In addition, front wall 220 is provided with a

recess 342 extending from edge line 344 into front wall 220 in direction towards edge 242 thereof but with a limited extent which is of the same dimensions as the extent of recess 340 from edge line 344 towards rear wall 224.

[0106] Recesses 340 and 342 are elements provided for lifting device 338.

[0107] Lifting device 338 further comprises a push element 350 arranged inside body portion 212. Said push element 350 comprises two guide portions 352 and 354, one 352 of which is arranged in sliding abutment on an inner side of front wall 222 and the other 354 of which is arranged in abutment with an inner side 364 of rear wall 224. Guide elements 352 and 354 are interconnected by a base element 356 which forms a base plate of push element 350. Push element 350 comprising said two guide elements 352 and 354 extending from base element 356 has a U-shaped form.

[0108] Push element 350 is arranged within body portion 212 such that base element 356 in its inactive position is arranged close to or in abutment with an inner side 260 of bottom wall 220 so that base element 356 in said inactive position covers recess 340.

[0109] In addition, guide element 352 being arranged in sliding abutment on said inner side of said front wall 222 is arranged such that in said inactive position of push element 350 guide element 352 covers recess 342.

[0110] By virtue of recesses 340 and 342 it is possible to manually contact push element 350, in particular to push base element 356 in a direction towards opening 274 so as to raise base element 356 into an active position above bottom wall 220.

[0111] If inner space 300 of body portion 212 is filled with smoking articles 280 those smoking articles 280a which are arranged in a lifting zone 360 can be lifted into an easy access position by manually acting on base element 356 and pushing base element 356 towards opening 274. In this instance base element 356 acts as an article lifter raising all smoking articles 280a in said lifting zone 360 resting on it with respect to all those smoking articles 280 arranged outside lifting zone 360.

[0112] Push element 350 can be made of resilient paperboard.

[0113] However, it is also possible to manufacture push element 350 by using a flexible material. For example, push element 350 can be made of a strip of flexible material or an entire inner liner of body portion 212 receiving a lower portion of all smoking articles 280 extending between rim 270 and bottom wall 220.

[0114] In a fourth embodiment, shown in Figs. 12 to 15, body portion 212' made of resilient paperboard comprises bottom wall 220 as well as front wall 222 and rear wall 234, however, body portion 212' comprises no side walls. In contrast to the third embodiment, body portion 212' comprises side openings 428 and 430 extending between said bottom wall 220 and top wall sections 436a and 436b which connect front wall 222 and rear wall 224 on opposite sides of opening 274 for fixing them relative to each other.

[0115] Similar to body portion 212' lid portion 214' comprises front wall 302, rear wall 304 and top wall 316 but does not need side walls 308 and 310 shown in connection with the third embodiment.

[0116] Side openings 428 and 430 extending between bottom wall 220 and top wall portions 436a and 436b of body portion 212' are closed by an inner liner 440 of said package made of flexible material and enclosing all cigarettes 280 arranged within said package.

[0117] Inner space 300' of said package is defined by an inner liner 440 thereof. Inner liner 440 is preferably made of flexible material, in particular a material identical or similar to the one used in the so-called "soft packs". In its maximum extended position inner liner 440 with side pockets 442 and 444 extend beyond side openings 428 and 430. Pockets 442 and 444 in the case of a full package of smoking articles 280 have their maximum extent beyond side openings 428 and 430, with an increasing number of smoking articles 280 removed from said package through opening 274, pockets 442 and 444 due to the flexible material used, can be squeezed and deformed so that their extent beyond side openings 428 and 430 can be easily reduced.

[0118] The fourth embodiment as shown in Figs. 12 to 15 also comprises push element 350 which is designed in an identical manner as shown in connection with the third embodiment. In particular recesses 340 and 342 within bottom wall 220 and front wall 222 are shaped in an identical manner so that push element 350 has the same function as described in connection with the third embodiment. However, in this case lifting zone 360 has an extent limited by inner edges 438a, b of top wall sections 436a, b, which limit opening 274 in addition, to upper edge 242 of front side wall 222.

[0119] As shown in Figs. 14 and 15, lid portion 214' in its open position can be fixed by lip sections 334, the function of which was already described in connection with the third embodiment.

[0120] Due to the fact that the fourth embodiment of the package according to the present invention with body portion 212' and 214' comprises stiff components similar to those of the well known "hard packs" but with pockets 442 and 444 comprising flexible or "soft" components the fourth embodiment can be considered to be a "modified soft pack".

Claims

1. A package for smoking articles or articles with a similar elongated shape, said package comprising

   a body portion (12, 212) including a bottom (20, 220) and at least two walls (22, 24; 222, 224) extending from said bottom (20, 220),
   said body portion (12, 212) being provided with an opening (34, 274),

said body portion (12, 212) enclosing an inner space (100, 200) for receiving said articles (102, 280);

said inner space (100, 200) comprising a removal zone extending from said bottom (20, 220) to said opening (34, 274); and

a lid portion (14, 214) hingedly connected to said body portion (12, 212);

said lid portion (14, 214) being moveable between a closing position in which said lid portion (14, 214) covers said opening (34, 274) and an open position in which said opening (34, 274) is uncovered,

characterized in

that said package comprises a lifting device (108, 338) for lifting articles (102, 280a) arranged in a lifting zone (134, 260), that said lifting device (108, 338) comprises an article lifter (120, 356) arranged within said body portion (12, 212) adjacent to said lifting zone (134, 360), said article lifter (120, 356) being moveable between an inactive position in which said article lifter (120, 356) is arranged close to said bottom (20, 220) of said body portion (12, 212) and an active position in which said article lifter (120, 356) is arranged at a distance from said bottom (20, 220) which is greater than the distance of said article lifter (120, 356) in said inactive position, for presenting said articles (102a, 280a) arranged in said lifting zone (134, 360) in an easy access position.

2. Package according to claim 1, characterized in that said lifting device (108, 338) comprises an actuating element (122, 356) connected to said article lifter (120, 356) for moving said article lifter (120, 356) from said inactive position into said active position.

3. Package according to claim 2, characterized in that said actuating element (122) is comprised of a lifting strip (110).

4. Package according to claim 3, characterized in that said lifting strip (110) comprises a pulling section (122) extending from said article lifter (120) through said opening (34) and having an end piece (126) arranged outside said body portion (12).

5. Package according to claim 4, characterized in that said pulling section (122) extends via a guide element (38) arranged at said body portion (12) to said end piece (126) fixed to said lid portion (14), said end piece (126) in said closing position of said lid portion (14) being arranged closer to said guide element (38) than in said open position of said lid portion (14).

6. Package according to claim 5, characterized in that said guide element (38) is arranged at a distance from an axis of rotation (18) of said hinge (16).

7. Package according to claim 6, characterized in that said guide element (38) is supported by said one of said walls supporting said hinge (16).

8. Package according to claim 7, characterized in that said guide element (38) is formed by a rim (40) of said opening (34).

9. Package according to claim 8, characterized in that said rim (40) of said opening (34) is formed by a collar (46) of said body portion (12).

10. Package according to claim 9, characterized in that said collar (46) extends beyond edges (72, 74) of said body portion (12) provided for abutment of corresponding edges (92, 94, 96) in said closing position of said lid portion (14).

11. Package according to any of claims 3 to 10, characterized in that said lifting strip (110) comprises a fastening section (112) extending in said inner space (100) outside said lifting zone (134) and being fixed to said body portion (12).

12. Package according to claim 11, characterized in that said fastening section (112) is fixed to said bottom (20) of said body portion (12).

13. Package according to any of claims 3 to 12, characterized in that said lifting strip (110) comprises a lifting section (120) arranged between said fastening section (112) and said pulling section (122).

14. Package according to claim 13, characterized in that said lifting section (120) forms said article lifter.

15. Package according to claim 1, characterized in that said lifting device (338) comprises a manually pushable push element (350) acting on said article lifter and being arranged within said body portion (212) close to said bottom (220) and an access opening (340, 342) in said body portion (212) giving manual access to said push element (350).

16. Package according to claim 15, characterized in that said access opening comprises a bottom opening (340) in said bottom (220) and an adjacent opening (342) arranged in a front wall (222) of said body portion (212) adjacent said bottom (220).

17. Package according to claim 15 or 16, characterized in that said push element (350) is guided by opposite walls (222, 224) of said body portion (212).

18. Package according to claim 17, characterized in that said push element (350) comprises a base element (356) and at least one guide element (352) arranged in sliding abutment with guide surfaces of at least one (222) of said opposite walls (222, 224).

19. Package according to claim 18, characterized in that said base element (356) and said guide element (352) in sliding abutment are arranged to cover said access opening (340, 342) in an inactive position of said push element (350).

20. Package according to any of claims 14 to 19, characterized in that said push element (350) forms a insert arranged in said body portion (212).

21. Package according to any of claims 18 to 20, characterized in that said push element (350) with said base element (356) and said guide elements (352, 354) forms a U-shaped part.

22. Package according to any of claims 18 to 21, characterized in that said base element (356) is said article lifter.

23. Package according to any of the preceding claims, characterized in that said body portion (12; 212) comprises at least two walls (22, 24; 222, 224) extending between said bottom (20, 200) and a top wall (26, 436) and at least one side opening (140, 428, 430).

24. Package according to claim 23, characterized in that said side opening (140, 428, 430) extends between said bottom (20, 220) and said top wall (26, 436).

25. Package according to claim 23 or 24, characterized in that said body portion (12, 212) receives an insert portion (150, 440) limiting said inner space in a region of said side opening (140, 428, 430).

26. Package according to claim 25, characterized in that said insert portion (150, 440) in its initial position extends beyond said side opening (428, 430) with a maximum extent and is movable towards positions having reduced extent.

27. Package according to claim 25 or 26, characterized in that said insert portion (150) is of stiff material.

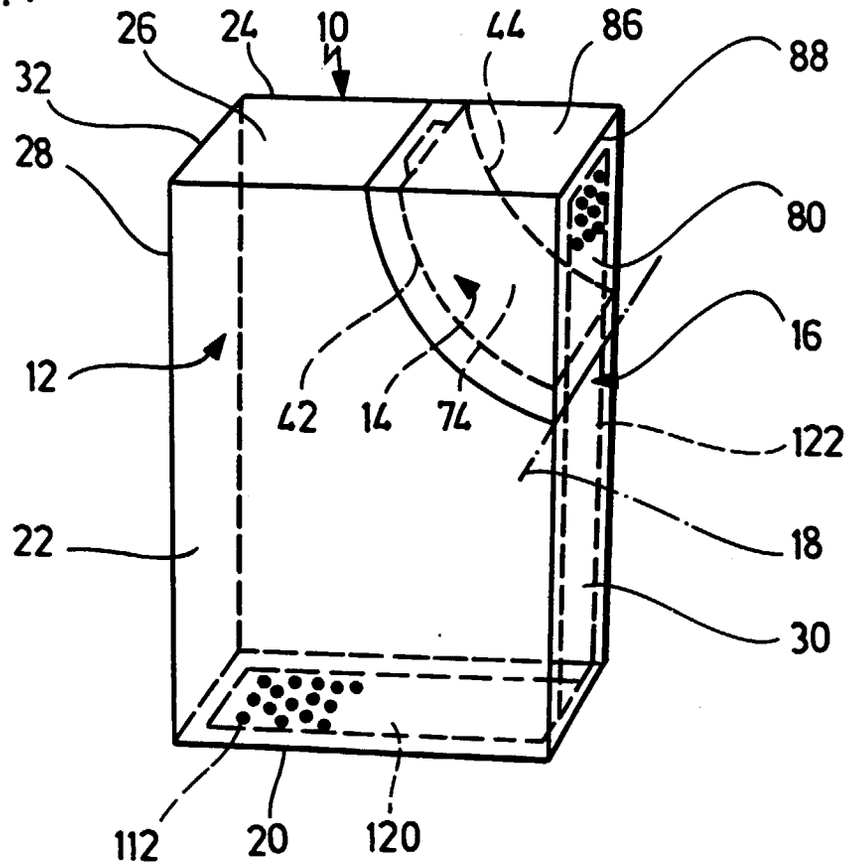
28. Package according to claim 27, characterized in that said insert portion is a drawer-like supplementary body portion (150) moveable with respect to said body portion (12').

29. Package according to claim 28, characterized in that said supplementary body portion (150) and said body portion (12') are provided with cooperating stop elements (180, 182) defining said maximum extent in said initial position and allowing movement towards said positions having reduced extent.

30. Package according to any of claims 23 to 26, characterized in that said insert portion (440) is of flexible material, that said insert portion has an initial shape defining a maximum extent beyond said side opening (428, 430), said shape being changeable by deformation of said flexible material so as to obtain a reduced extent beyond said side opening of said insert portion.

31. Package according to claim 30, characterized in that said insert portion (440) is an inner liner arranged within said body portion (212') and comprises pockets (442, 444) which are arranged in opposite side openings (428, 430) and which in their initial position extend beyond said side openings (428, 430).

FIG.1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24
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122
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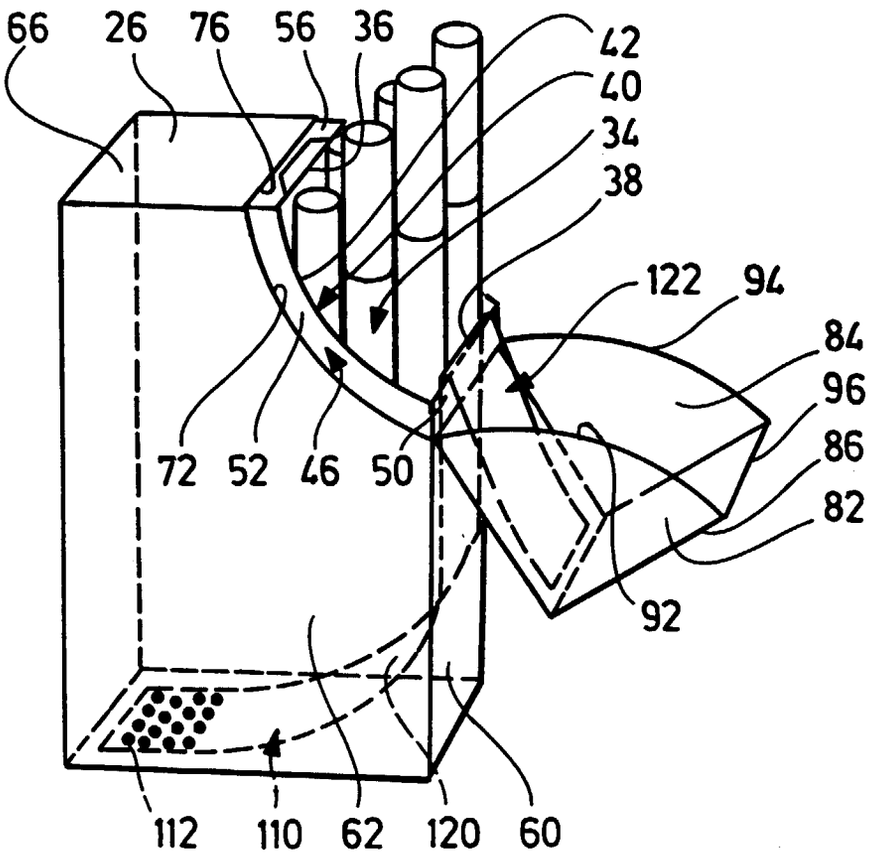
112
20
120

FIG.2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36
42
40
34
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94
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72
52
46
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92
112
110
62
120
60

FIG.3

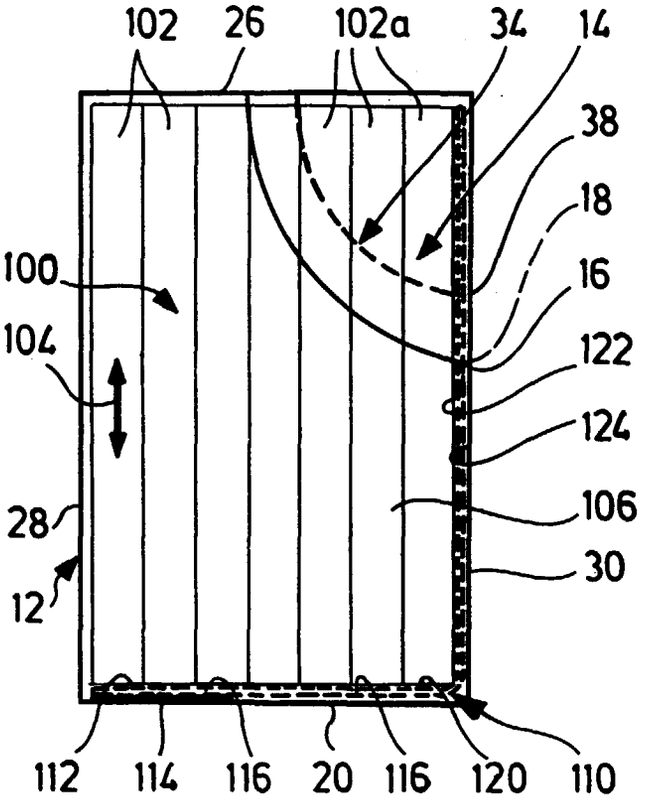

102
26
102a
34
14
38
18
100
16
104
122
124
106
28
30
12
112
114
116
20
116
120
110

FIG.4

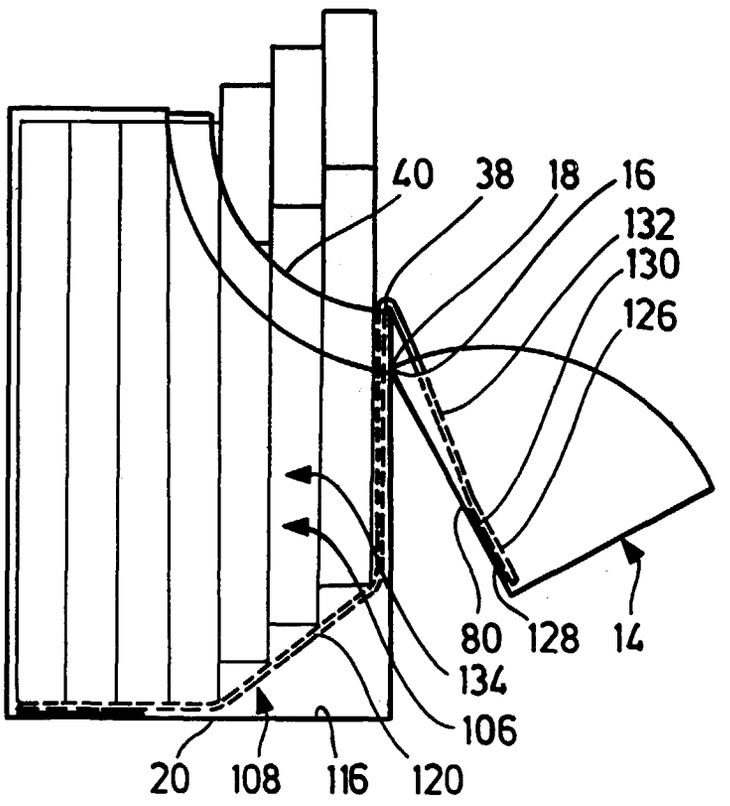
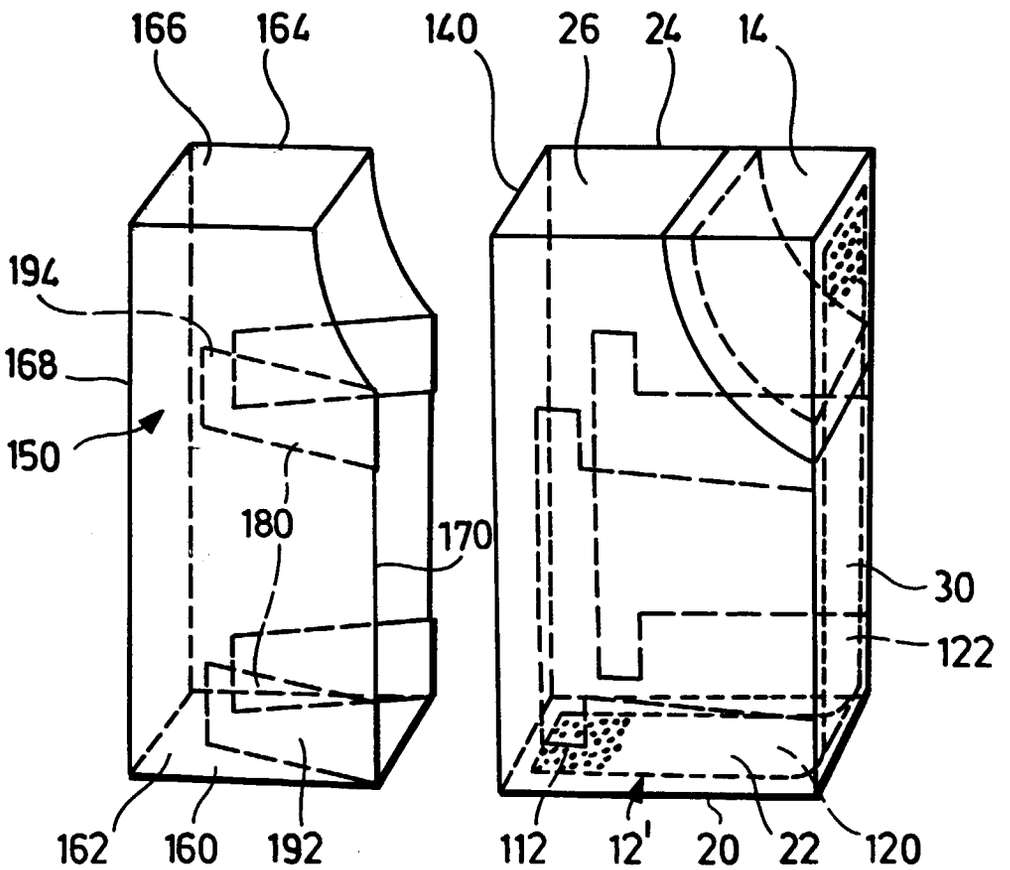

40
38
18
16
132
130
126
80
128
14
134
106
20
108
116
120

FIG. 5


166
164
140
26
24
14
194
168
150
180
170
30
122
162
160
192
112
12'
20
22
120

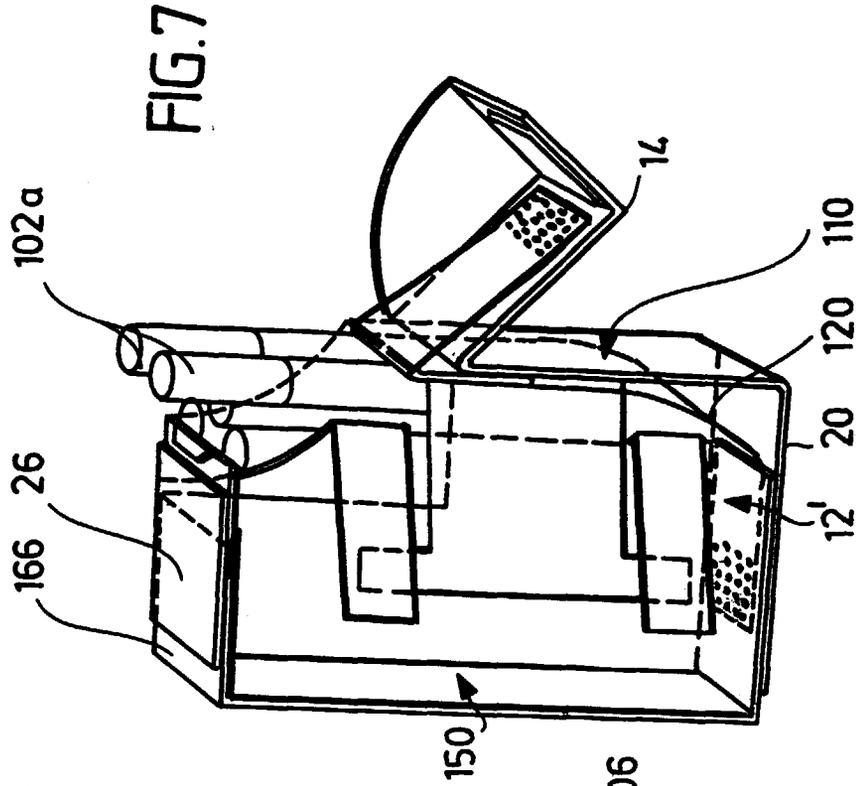

102a
14
110
120
20
12'
26
166
150

FIG.7

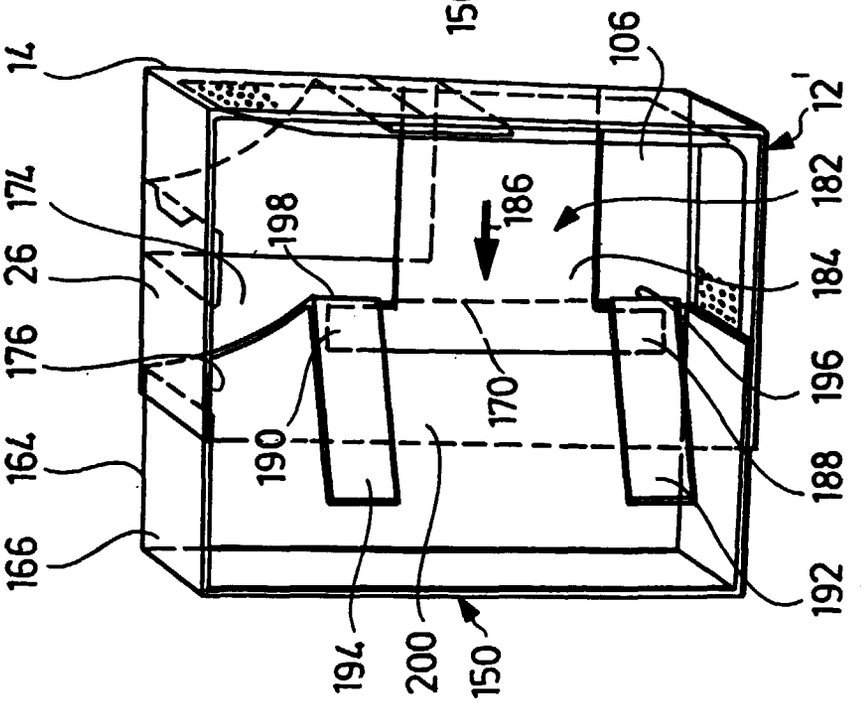
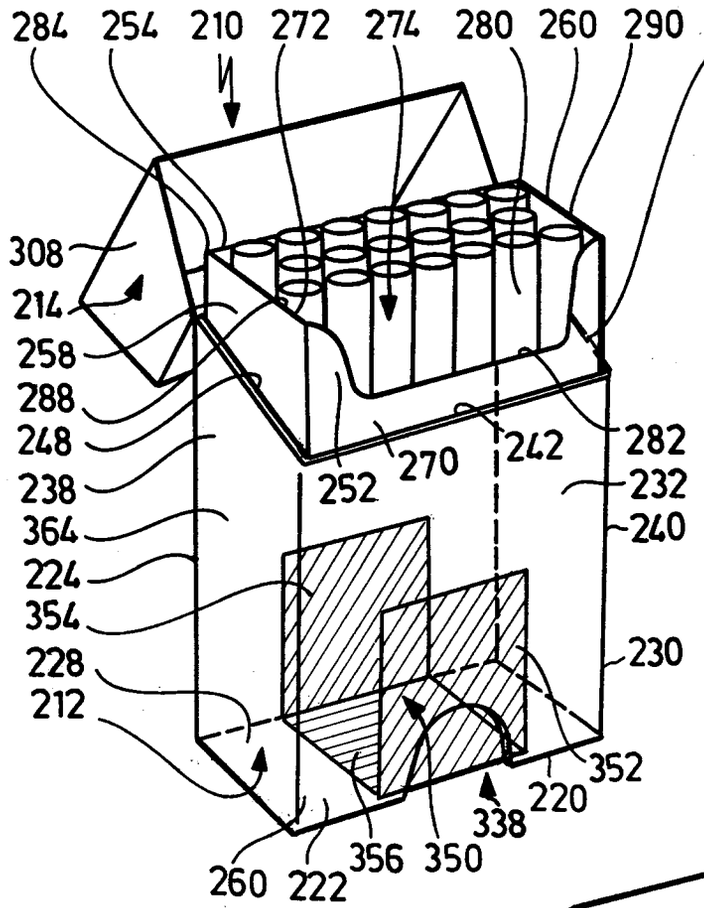

14
106
12'
174
198
186
182
26
184
176
196
170
164
190
188
166
192
194
200
150

FIG.6


284
254
210
272
274
280
260
290
250
308
214
258
288
248
238
364
224
354
228
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270
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282
232
240
230
352
220
338
260
222
356
350

FIG.8

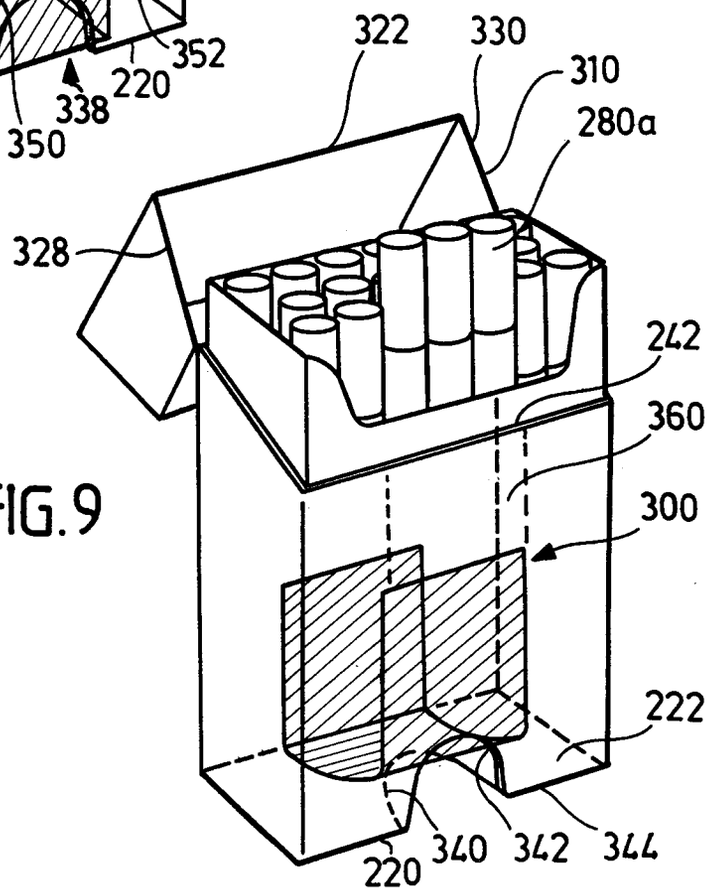
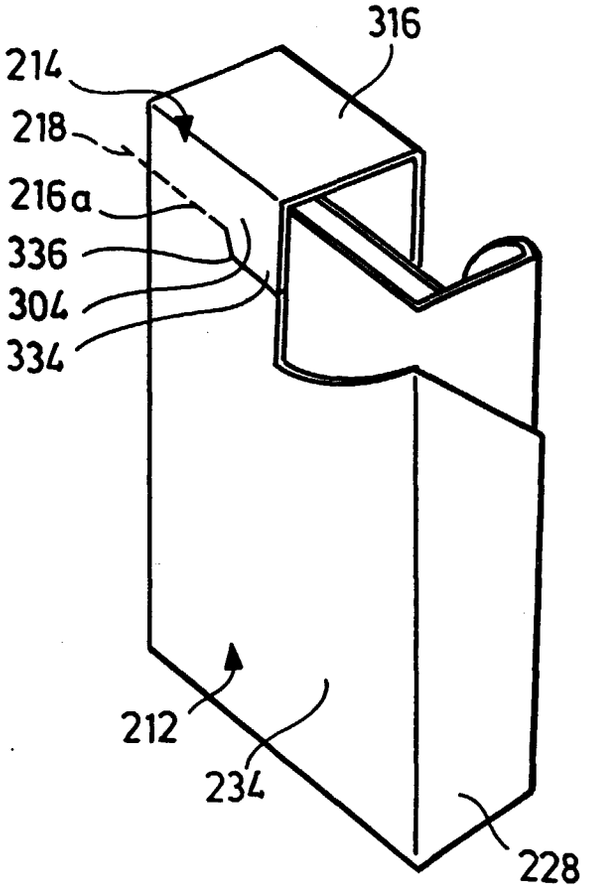

322
330
310
280a
328
242
360
300
222
220
340
342
344

FIG.9

FIG.10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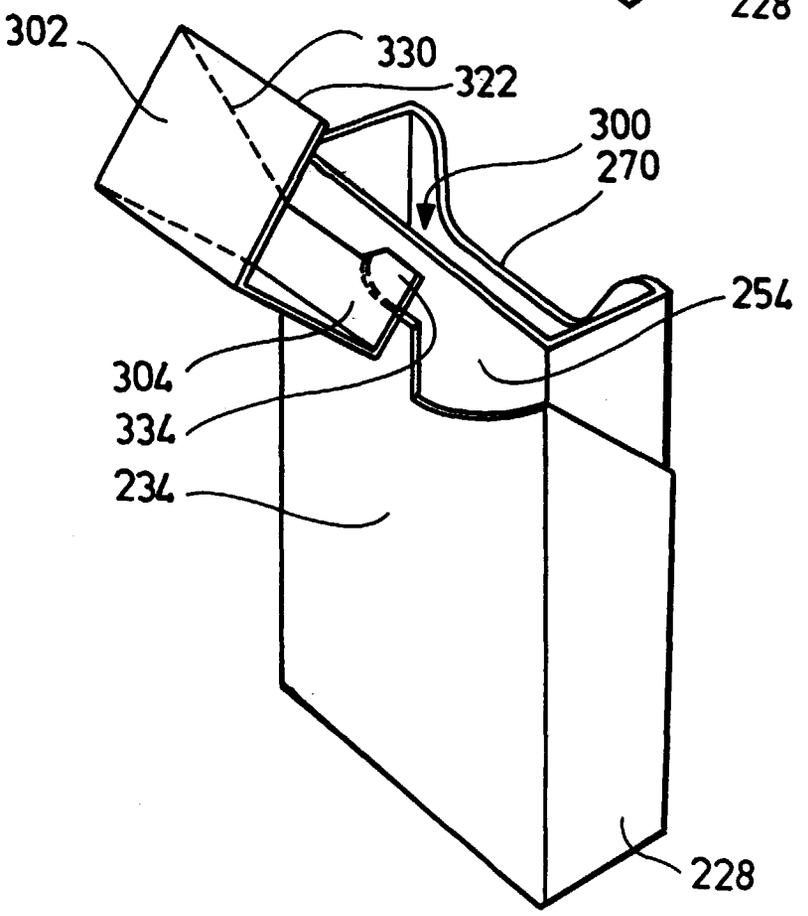
214
218
216a
336
304
334
212
234
228

FIG.11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330
322
300
270
254
304
334
234
228

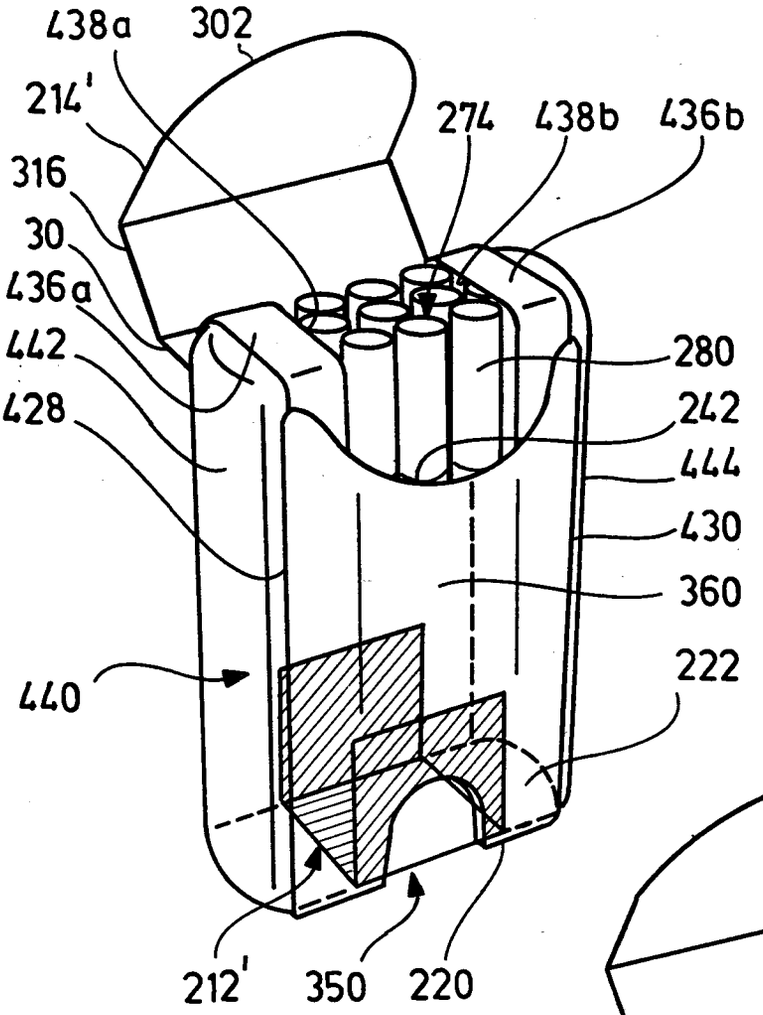

438a
302
214'
274
438b
436b
316
30
436a
442
428
280
242
444
430
360
440
222
212'
350
220

FIG. 12

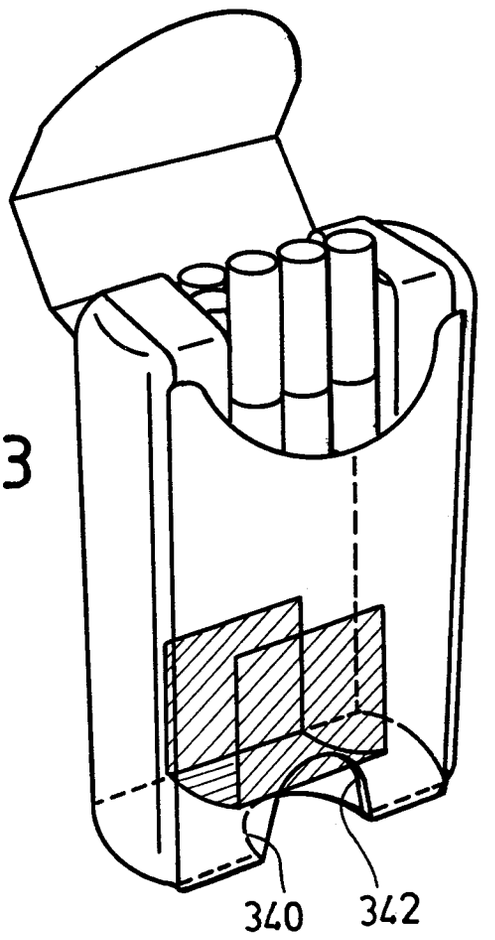

340
342

FIG. 13

FIG. 14

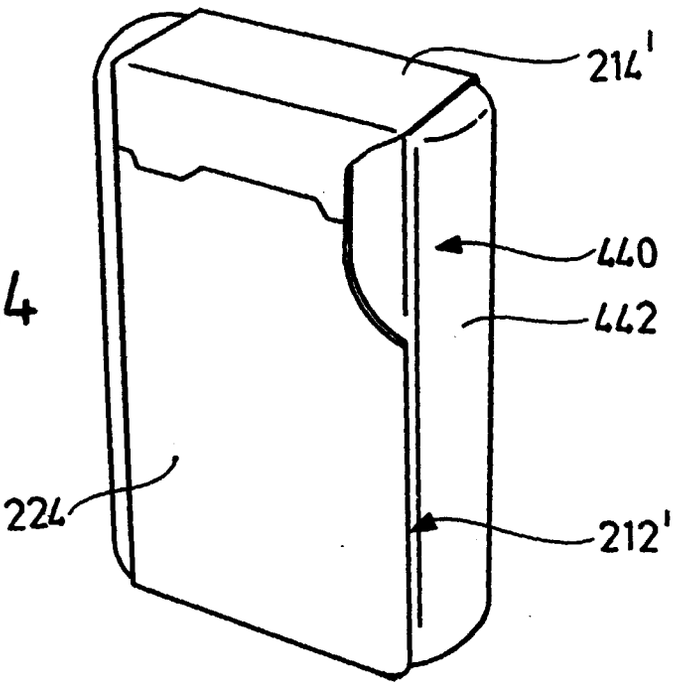
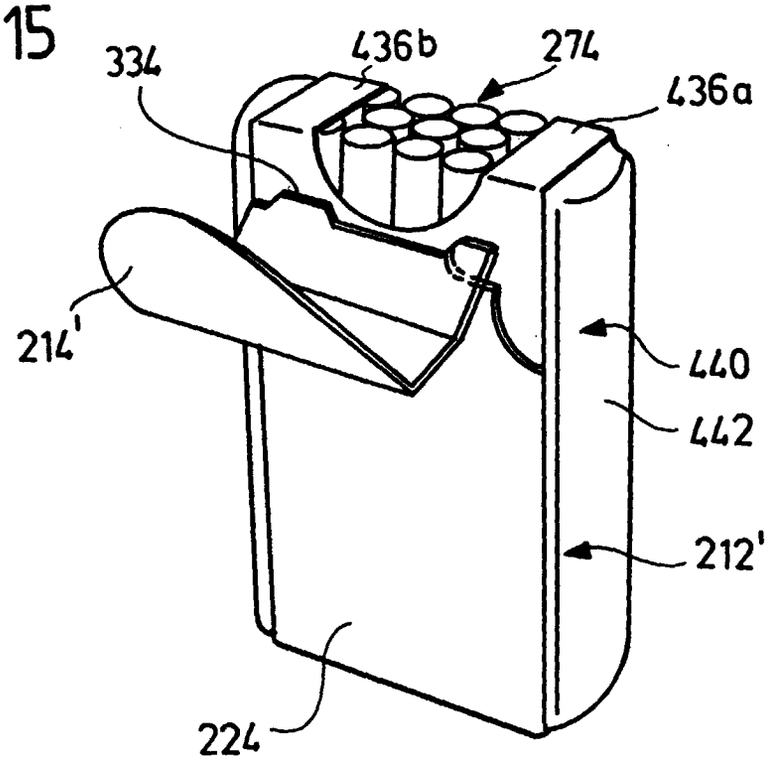


FIG. 15



European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 98 10 0047

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X Y	BE 397 427 A (TINCHANT Y GONZALES CIE.) * the whole document *	1-4 5-20, 22-29	B65D85/10 B65D5/38
Y	CH 260 463 A (FRITSCHI) * the whole document *	5-14	
X A	CH 202 391 A (MORF) * the whole document *	1,2 3-14	
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Y A	US 3 282 465 A (W.DAVIS) 1 November 1966 * the whole document *	15-20,22 21	
Y	EP 0 421 311 A (FOCKE & CO) 10 April 1991 * the whole document *	23-29	
A	US 2 052 015 A (B. CROSBY) 25 August 1936 * the whole document *	15-22	TECHNICAL FIELDS SEARCHED (Int.Cl.6)
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A	US 1 448 326 A (C.ARNOLD) 13 March 1923 * the whole document *	30,31	
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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	7 October 1998	Pernice, C

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

EPO FORM 1503 03.82 (P04C01)

European Patent Office

Application Number
EP 98 10 0047

CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

European Patent Office

LACK OF UNITY OF INVENTION
SHEET B

Application Number
EP 98 10 0047

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims: 1-14

A package for smoking articles comprising: a body portion having a space for receiving said articles, a lid hingedly connected to said body portion and a lifting device for lifting said articles. Said lifting device comprising an actuating element connected to an article lifter for moving said article lifter from an inactive position to an active position.

2. Claims: 15-22

A package for smoking articles comprising: a body portion having a space for receiving said articles, a lid hingedly connected to said body portion and a lifting device for lifting said articles. Said lifting device comprising a manually pushable push element, acting on said article lifter arranged within the body portion and close to an access opening in the bottom wall, and moving said article lifter from an inactive position to an active position.

3. Claims: 23-31

A package for smoking articles comprising: a body portion having a space for receiving said articles, a lid hingedly connected to said body portion and a lifting device for lifting said articles. Said lifting device being movable from an inactive position to an active position. Said body portion further comprising at least one side opening.

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 98 10 0047

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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07-10-1998

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82