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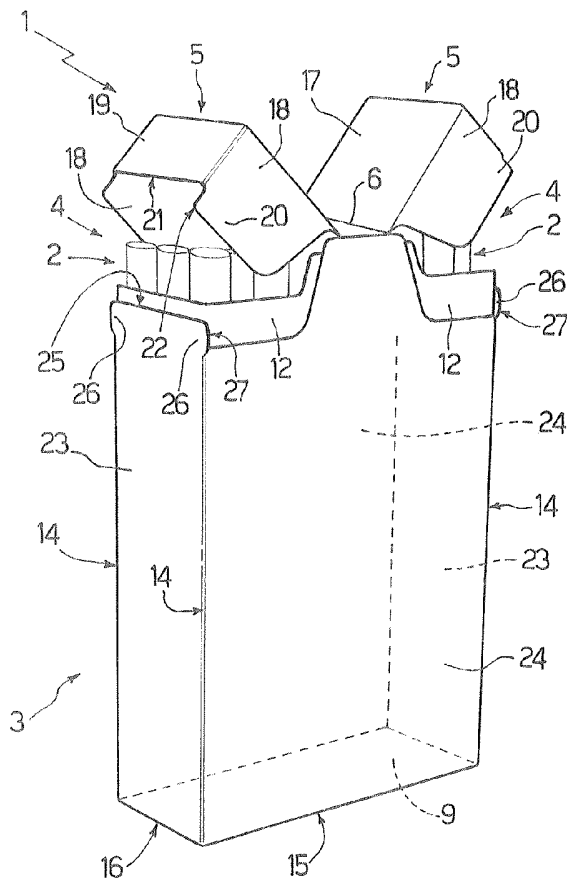
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(54) Title: RIGID, HINGED-LID, CLICK-OPEN PACKAGE FOR TOBACCO ARTICLES



(57) Abstract: A rigid package (1) for tobacco articles (2), having a container (3) having two extraction openings (4); and two lids (5), each hinged to the container (3) along a respective hinge (6) to rotate, with respect to the container (3), between an open position and a closed position respectively opening and closing the relative extraction opening (4); each lid (5) has tongues (20) which cooperate with relative tongues (26) on the container (3); and, in use, when opening and closing the lids (5), the tongues (26) come into contact with one another, are deformed, and spring back to their original shape while producing an audible sound.

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RIGID, HINGED-LID, CLICK-OPEN PACKAGE FOR TOBACCO
ARTICLES

10 TECHNICAL FIELD

The present invention relates to a rigid, hinged-lid package for tobacco articles.

The present invention may be used to particular advantage in a rigid cigarette packet, to which the
15 following description refers purely by way of example.

BACKGROUND ART

Rigid, hinge-lid cigarette packets are currently the most widely marketed, by being easy to make, easy and practical to use, and providing good mechanical
20 protection of the cigarettes inside.

A rigid, hinge-lid cigarette packet normally comprises a cup-shaped container having an extraction opening through which the cigarettes are extracted; and a lid hinged to the container along a hinge to rotate, with
25 respect to the container, between an open position and a closed position respectively opening and closing the extraction opening. A collar, folded into a U, is normally fitted inside the container, and projects partly

outwards of the extraction opening to engage a corresponding inner surface of the lid when the lid is in the closed position.

To further enhance rigid, hinged-lid cigarette packets, a particular mechanical connection between the collar and the lid has been proposed, whereby, when the lid is closed, a clearly audible sound is produced, thus indicating correct opening or closure of the lid.

EP-0884247-A1, for example, describes a rigid, hinged-lid cigarette packet comprising a click-on connection between the front inner wall of the lid and the front outer wall of the collar. More specifically, the click-on connection comprises a tongue projecting from the front outer wall of the collar, and which, when the lid is closed, engages a seat formed in the front inner wall of the lid. When the lid is completely closed, engagement of the collar tongue inside the lid seat produces a clicking sound clearly audible by the user.

In rigid cigarette packets of the type described above, the collar must therefore be present and perfectly positioned. If the collar is not perfectly positioned, the tongue cannot engage the seat on the front wall of the lid properly, so that not only is the clicking sound weak, if not altogether inaudible, but the lid also fails to close neatly and properly. In this connection, it should be stressed that positioning the collar correctly with respect to the container and the lid is technically extremely difficult to achieve. In particular, at the

folding stage, direct contact between the content of the packet, i.e. the group of cigarettes, and the collar frequently causes the collar to shift with respect to the lid. Moreover, the tongue on the front wall of the collar
5 makes rigid packets of the above type unsightly and difficult and expensive to produce.

DISCLOSURE OF INVENTION

It is an object of the present invention to provide an alternative rigid package for tobacco articles, which
10 is easy and practical to use, has none of the aforementioned drawbacks, and, at the same time, is cheap and easy to produce.

According to the present invention, there is provided a rigid package for tobacco articles, as claimed
15 in Claim 1 or in any one of the following Claims depending directly or indirectly on Claim 1.

BRIEF DESCRIPTION OF THE DRAWINGS

A number of non-limiting embodiments of the present invention will be described by way of example with
20 reference to the accompanying drawings, in which:

Figure 1 shows a front view in perspective of a rigid cigarette packet in accordance with the present invention and in a closed configuration;

Figure 2 shows a front view in perspective of the
25 Figure 1 rigid cigarette packet in an open configuration;

Figure 3 shows a front view of the Figure 1 rigid cigarette packet in a closed configuration;

Figure 4 shows a front view of the Figure 1 rigid

cigarette packet in a partly open configuration;

Figure 5 shows a section along line V-V of the Figure 3 packet;

Figure 6 shows a plan view of a blank by which to
5 produce the rigid cigarette packet in Figures 1-5;

Figures 7 and 8 show plan views of two further embodiments of blanks by which to produce the rigid cigarette packet in Figures 1-5;

Figure 9 shows a larger-scale detail of the Figure 6
10 blank;

Figure 10 shows a plan view of a blank by which to produce a collar of the rigid cigarette packet in Figures 1-5;

Figures 11 and 12 show plan views of two further
15 embodiments of blanks by which to produce the collar of the rigid cigarette packet in Figures 1-5;

Figure 13 shows a front view in perspective of a further embodiment of a rigid cigarette packet in accordance with the present invention and in a closed
20 configuration.

BEST MODE FOR CARRYING OUT THE INVENTION

Number 1 in Figures 1 and 2 indicates as a whole a rigid packet of cigarettes containing two parallelepiped-shaped groups 2 of cigarettes, each normally wrapped in a
25 respective sheet of foil packing material (not shown for the sake of clarity).

Packet 1 comprises a cup-shaped container 3 having two extraction openings 4; and two lids 5, each hinged to

container 3 along a respective hinge 6 to rotate, with respect to container 3, between an open position (Figure 2) and a closed position (Figures 1 and 3) respectively opening and closing respective extraction opening 4.

5 When lids 5 are in the closed position (Figure 1), packet 1 is in the form of a rectangular parallelepiped defined by a lateral surface 7, and by two, respectively top and bottom, flat, parallel, facing end walls 8 and 9 of the same size and bounding lateral surface 7. More
10 specifically, end wall 8 defines a top wall of packet 1, and end wall 9 defines a bottom wall of packet 1.

 Lateral surface 7 comprises two parallel, facing, flat minor lateral walls 10; and two, respectively front and rear, flat major lateral walls 11 facing each other
15 and crosswise to minor lateral walls 10.

 Packet 1 also comprises a collar 12, which is fitted (glued) inside container 3 to project partly outwards of extraction openings 4 and engage corresponding inner surfaces of lids 5 when lids 5 are in the closed position
20 (Figures 1 and 3). With particular reference to Figures 4 and 5, collar 12 is folded about groups 2 of cigarettes to define a substantially tubular package, and so as to be interposed between groups 2 of cigarettes and lateral walls 10 and 11 at a top portion of packet 1. Collar 12
25 is also folded to define a partition wall 13, which divides the inside of container 3 into two parts and keeps the two groups 2 of cigarettes separate. The particular shape of collar 12 provides for a high degree

of stability of packet 1.

As shown more clearly in Figures 1-4, four longitudinal edges 14 are defined between lateral walls 10 and 11, and four major transverse edges 15 and four minor transverse edges 16 are defined between end walls 8 and 9 and lateral walls 10 and 11. As shown in the accompanying drawings, longitudinal edges 14 and transverse edges 15 are all sharp, square edges.

Each lid 5 comprises a top wall 17; two parallel lateral walls 18 substantially perpendicular to wall 17; and a lateral wall 19 substantially perpendicular to walls 17 and 18 and substantially parallel to relative hinge 6. Each hinge 6 connects wall 17 to container 3, is located on top end wall 8, and extends crosswise to edges 15 and parallel to edges 16.

When lids 5 are both in the closed position, walls 17 define portions of wall 8, and walls 18 and 19 define portions of lateral walls 11 and 10 respectively.

Each lateral wall 18 has a tongue 20, which is coplanar with relative lateral wall 18, and projects beyond an edge 21, opposite wall 17, of lateral wall 19. Each tongue 20 is bounded by an edge 22. More specifically, each edge 22 is L-shaped with a slightly rounded corner at a relative edge 14.

Edge 22 may preferably be straight or non-straight. More specifically, edge 22 preferably comprises an outwardly concave portion at edge 21 to lock lid 5 better in the closed position.

Container 3 comprises two minor lateral walls 23, each defining a portion of a respective wall 10; and two major lateral walls 24, each defining a portion of a respective wall 11. Each wall 23 is bounded at the top by an edge 25, which, when relative lid 5 is in the closed position, engages respective edge 21. Each wall 23 comprises two tongues 26, each of which is coplanar with and projects laterally from relative wall 23 at a respective edge 14 and at edge 25. Each tongue 26 is bounded by an outwardly convex edge 27.

It should be noted that, when lid 5 is in the closed position, tongues 20 and 26 lie in transverse, in particular, perpendicular, planes, so that tongues 20 and 26 emit a clicking sound whenever the lid is opened or closed.

The following is a description of what occurs when either of lids 5 is opened and closed, and with reference, for the sake of simplicity, to one tongue 20 and the corresponding tongue 26.

In actual use, when a lid 5 is rotated from the open to the closed position, tongue 20 intercepts tongue 26 and is deformed substantially elastically as it slides along edge 27. Once lid 5 reaches the closed position, tongue 20 springs back to its original shape and emits a clicking sound clearly audible by the user.

When the lid is rotated from the closed to the open position, tongue 20 intercepts tongue 26, which is deformed substantially elastically as it slides on edge

22. When lid 5 reaches the open position, tongue 26 springs back to its original shape and emits a clicking sound clearly audible by the user.

It should be noted that, when rotating lid 5 about hinge 6, tongue 20 travels along a trajectory T crosswise to tongue 26 (see Figure 4 in particular).

As shown in Figures 6 and 9, packet 1 is formed from a flat blank 28 substantially in the form of an elongated rectangle, and the component parts of which are indicated, where possible, using the same reference numbers, with superscripts, as for the corresponding parts of packet 1.

Blank 28 comprises two longitudinal fold lines 29; and a number of transverse fold lines 30 defining, between the two longitudinal fold lines 29, two panels 11' and 11", each defining a respective lateral wall 11; two panels 8' and 8" defining top end wall 8; and a panel 9' defining bottom end wall 9. Panels 11' and 11" are located on opposite sides of panel 9'; panel 8' is located on the opposite side of panel 11' to panel 9'; and panel 8" is located on the opposite side of panel 11" to panel 9'.

Panel 11' has two lateral wings 10' located on opposite sides of panel 11' and separated from panel 11' by longitudinal fold lines 29. Each lateral wing 10' has two panels 23' and 19' separated by a precut transverse line 21'.

Panel 11" has two lateral wings 10" located on

opposite sides of panel 11" and separated from panel 11" by longitudinal fold lines 29. Each lateral wing 10" has two panels 23" and 19" separated by a precut transverse line 21". And panels 19' and 19" are superimposed to
5 define lateral walls 19.

Each panel 23" has a substantially rectangular longitudinal appendix 31; appendixes 31 are located on opposite sides of panel 9'; and panel 9' and appendixes 31 define end wall 9.

10 An appendix 17' projects from each of wings 19"; appendixes 17' are located on opposite sides of panel 8", define top walls 17 of lids 5, together with portions of panels 8' and 8", and are each separated from respective wing 19" by one of transverse fold lines 30.

15 Panels 8' and 8" each have two fold lines 6' parallel to longitudinal lines 29 and defining hinges 6.

Each panel 11' and 11" comprises two precut transverse lines 32 separating walls 24 of container 3 from walls 18 of lids 5.

20 With particular reference to Figure 9, it should be pointed out that panels 23' and 23" are bounded, at precut lines 32, by respective slits 27' and 27" defining edges 27; and, in the same area, precut lines 32 each define an edge 22.

25 As shown in Figure 10, collar 12 is formed from a flat blank 33 having a number of panels 34 separated by transverse fold lines 35. Figure 11 shows an alternative embodiment of blank 33, in which tongues 36 of collar 12

stabilize closure of the lids.

Figure 7 shows a further embodiment of blank 28, which differs from blank 28 in Figure 6 substantially by panels 11' and 11" being located on opposite sides of a panel 8' defining top end wall 8. Panels 9' and 9" are located on opposite sides of panels 11' and 11" to panel 8'.

In the Figure 8 embodiment, panel 8" of blank 28 has an appendix 37 which, when folded, constitutes a portion of collar 12. In this case, the other portion of the collar is formed using blank 33 in Figure 12.

Though the above description relates to a packet comprising two extraction openings 4 and two lids 5, the teachings of the present invention may obviously be applied to any type of rigid packet for tobacco articles, such as conventional hinged-lid packets. Figure 13, for example, shows a conventional rigid packet having tongues 20 and 26, which interact to emit a sound when closing and opening the single lid 5.

In embodiments not shown, some longitudinal edges 14 and/or some transverse edges 15 and 16 are non-square, rounded or bevelled edges. For example, longitudinal edges 14 may all be non-square, rounded or bevelled edges, or (as in the packet of cigarettes described in Patent Application EP-A1-0764595), major transverse edges 15 may all be non-square, rounded or bevelled edges. Alternatively, some longitudinal edges 14 and some transverse edges 15 and 16 may be non-square, rounded

edges, so as to have non-square, rounded or bevelled longitudinal edges 14 and transverse edges 15 and 16.

In a different embodiment not shown, packet 1 may resemble the packet of cigarettes described in Patent
5 Application EP-A1-1066205; in which case, each major lateral wall is outwardly convex, and comprises a flat central portion, and two curved lateral fold strips connecting the flat central portion to the minor lateral walls 10 along respective sharp, non-square longitudinal
10 edges 14.

In another embodiment not shown, packet 1 may resemble the packet of cigarettes described in Patent Application IT-BO2001A000584; in which case, each major lateral wall 11 is outwardly convex, and comprises a flat
15 central portion, and two curved lateral fold strips connecting the flat central portion to end walls 8 and 9 along respective sharp, non-square transverse edges 15.

In embodiments not shown, each edge 25 and respective edge 21 contact each other when lid 5 is in
20 the closed position; edges 25 and 21 may be spaced apart, may or may not be parallel, and may be straight or non-straight, e.g. curved.

The embodiments described above of packet 1 have various advantages, and in particular are fast and easy
25 to produce. Packet 1 is also made relatively easy to produce by tongues 26 and lateral walls 10 and 11 being portions of the same blank.

Given the numerous advantages of packet 1 as

described above, the form of packet 1 may also be applied integrally to the manufacture of other types of rigid containers for tobacco articles, such as cartons of packets of cigarettes, or cigar packets.

CLAIMS

1) A rigid package for tobacco articles, comprising a container (3) having at least one extraction opening (4); and at least one lid (5) hinged to the container (3) along a hinge (6) to rotate, with respect to the container (3), between an open position and a closed position respectively opening and closing the extraction opening (4); the container (3) comprising at least a first lateral wall (23; 24) having at least a first tongue (26); the lid (5) comprising at least a second lateral wall (18; 19) having at least a second tongue (20); and the package (1) being characterized in that, when the lid (5) is in the closed position, the first and the second tongue (26, 20) lie in transverse planes; the first and the second tongue (26, 20) being so designed that, as the lid (5) is rotated between the open position and the closed position, the second tongue (20) comes into contact with the first tongue (26) so that at least the first or the second tongue (26, 20) is deformed substantially elastically and then substantially springs back to its original shape while at the same time producing an audible sound.

2) A package as claimed in Claim 1, wherein the first tongue (26) projects from and is coplanar with the first lateral wall (23; 24).

3) A package as claimed in Claim 1 or 2, wherein the second tongue (20) projects from and is coplanar with the

second lateral wall (18; 19).

4) A package as claimed in any one of Claims 1 to 3, wherein the second tongue (20) travels along a trajectory (T) crosswise to the first tongue (26).

5 5) A package as claimed in any one of Claims 1 to 4, wherein the lid (5) comprises a top wall (17) crosswise to the second lateral wall (18; 19), which in turn is crosswise to the first lateral wall (23; 24) when the lid (5) is in the closed position.

10 6) A package as claimed in Claim 5, wherein the hinge (6) connects the top wall (17) to the container (3).

7) A package as claimed in any one of Claims 1 to 6, wherein the second lateral wall (18; 19) is crosswise to
15 the hinge (6).

8) A package as claimed in any one of Claims 1 to 7, wherein the first lateral wall (23; 24) is substantially parallel to the hinge (6).

9) A package as claimed in any one of Claims 1 to 8,
20 and comprising two extraction openings (4); and two lids (5), each of which is hinged to the container (3) along a respective hinge (6) to rotate, with respect to the container (3), between an open position and a closed position respectively opening and closing the respective
25 extraction opening (4).

10) A package as claimed in Claim 9, wherein the two hinges (6) are parallel.

11) A package as claimed in any one of Claims 1 to

10, wherein the first and second tongue (26; 20) are so designed that, when closing the lid, the second tongue (20) intercepts the first tongue (26), is deformed substantially elastically, and then substantially springs
5 back to its original shape while at the same time producing an audible sound.

12) A package as claimed in any one of Claims 1 to 11, wherein the first tongue (26) has an outwardly convex first lateral edge (27).

10 13) A package as claimed in Claim 11 or 12, wherein the first tongue (26) comprises a first lateral edge (27); the first and the second tongue (26; 20) being so designed that, in use, when closing the lid (5), the second tongue (20) slides on said first lateral edge
15 (27).

14) A package as claimed in any one of Claims 1 to 13, wherein the first and the second tongue (26; 20) are so designed that, when opening the lid (5), the second tongue (20) intercepts the first tongue (26), which is
20 deformed substantially elastically and then substantially springs back to its original shape while at the same time producing an audible sound.

15) A package as claimed in any one of Claims 1 to 14, wherein the second tongue (20) comprises a non-
25 straight second lateral edge (22).

16) A package as claimed in Claim 15, wherein the second lateral edge (22) of the second tongue (20) is outwardly convex.

17) A package as claimed in Claim 14, wherein the second tongue (20) comprises a second lateral edge (22); the first and the second tongue (26; 20) being so designed that, in use, when closing the lid (5), the first tongue (26) slides on said second lateral edge (22).

18) A package as claimed in any one of Claims 1 to 17, wherein the container (3) and the lid (5) are different portions of a same folded first blank (28).

19) A package as claimed in Claim 18, and comprising a collar (12); the collar being formed by folding a second blank (33).

20) A package as claimed in Claim 19, wherein the second blank (33) is folded to define a partition wall (13) dividing the inside of said container (3) into two parts.

21) A package as claimed in Claim 19 or 20, wherein the collar (12) is folded to define a tubular package.

22) A package as claimed in any one of Claims 18 to 21, wherein the first blank (28) comprises an appendix (37) which, when folded, defines at least a portion of a collar (12).

23) A package as claimed in any one of Claims 1 to 22, wherein the first tongue (26) and the first lateral wall (23; 24) are portions of the same blank (28).

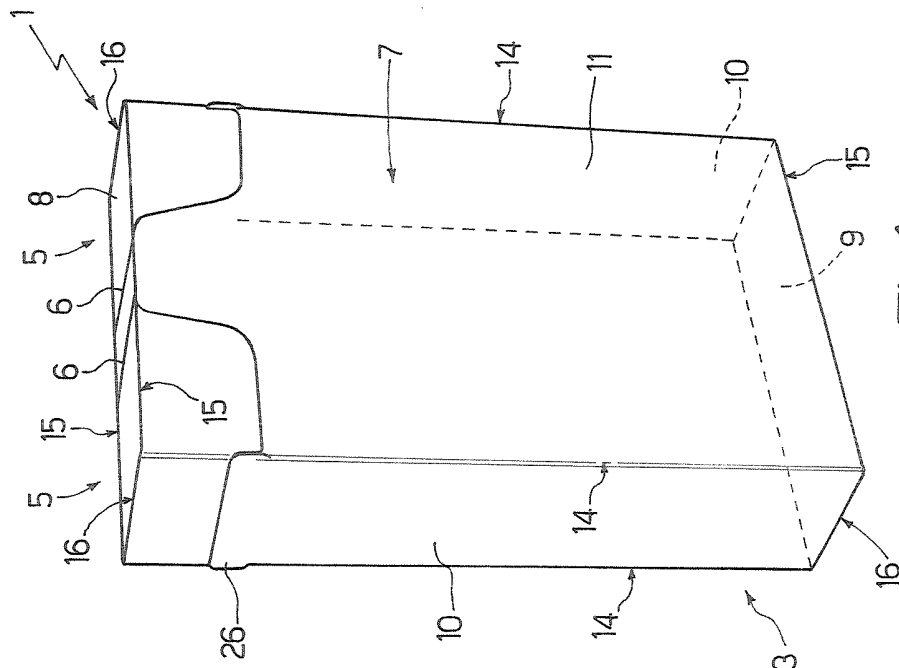


Fig.1

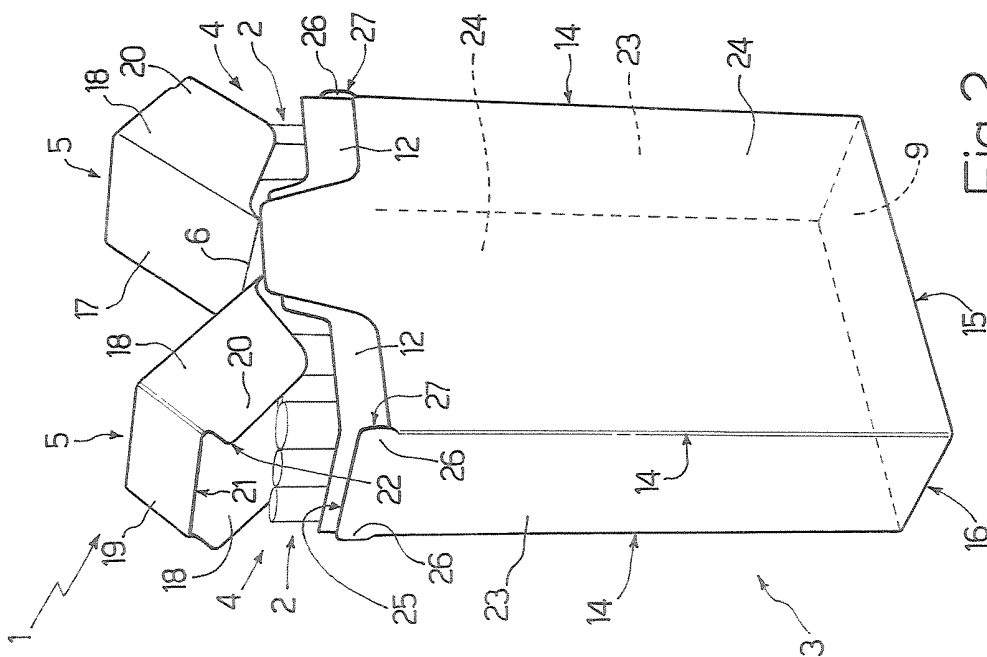


Fig.2

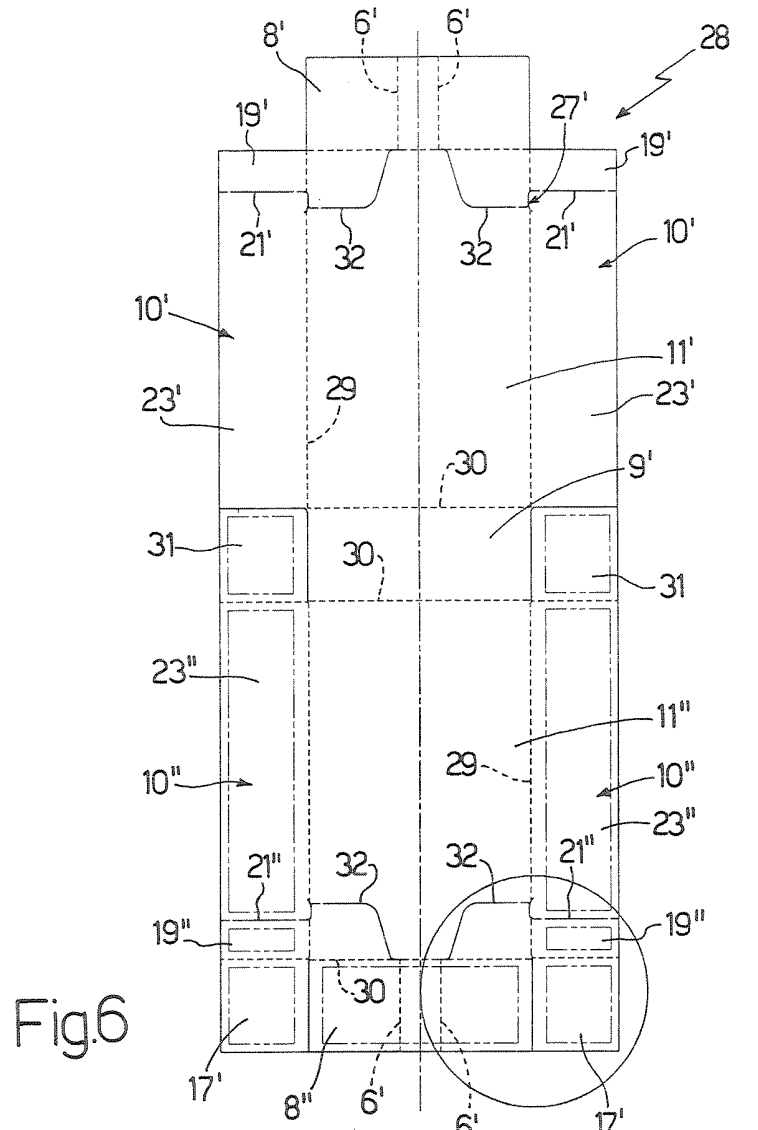


Fig.6

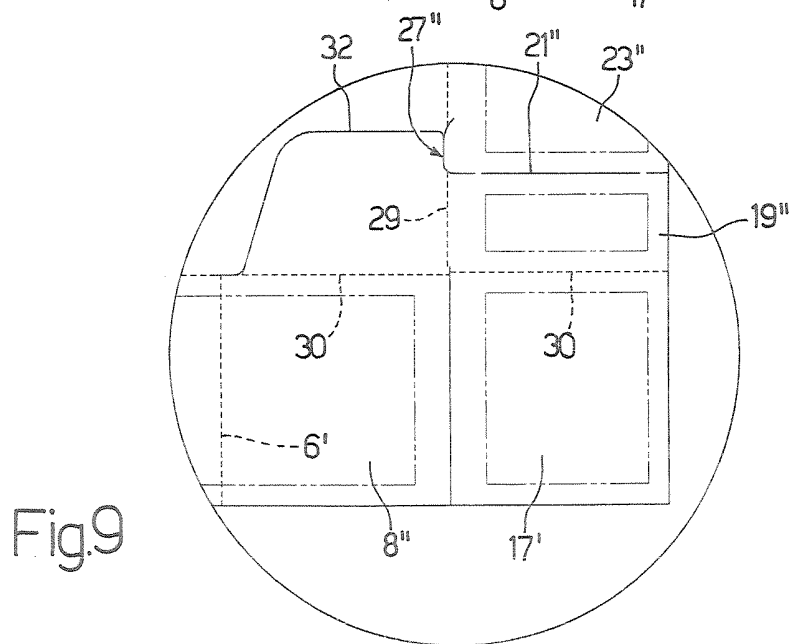


Fig.9

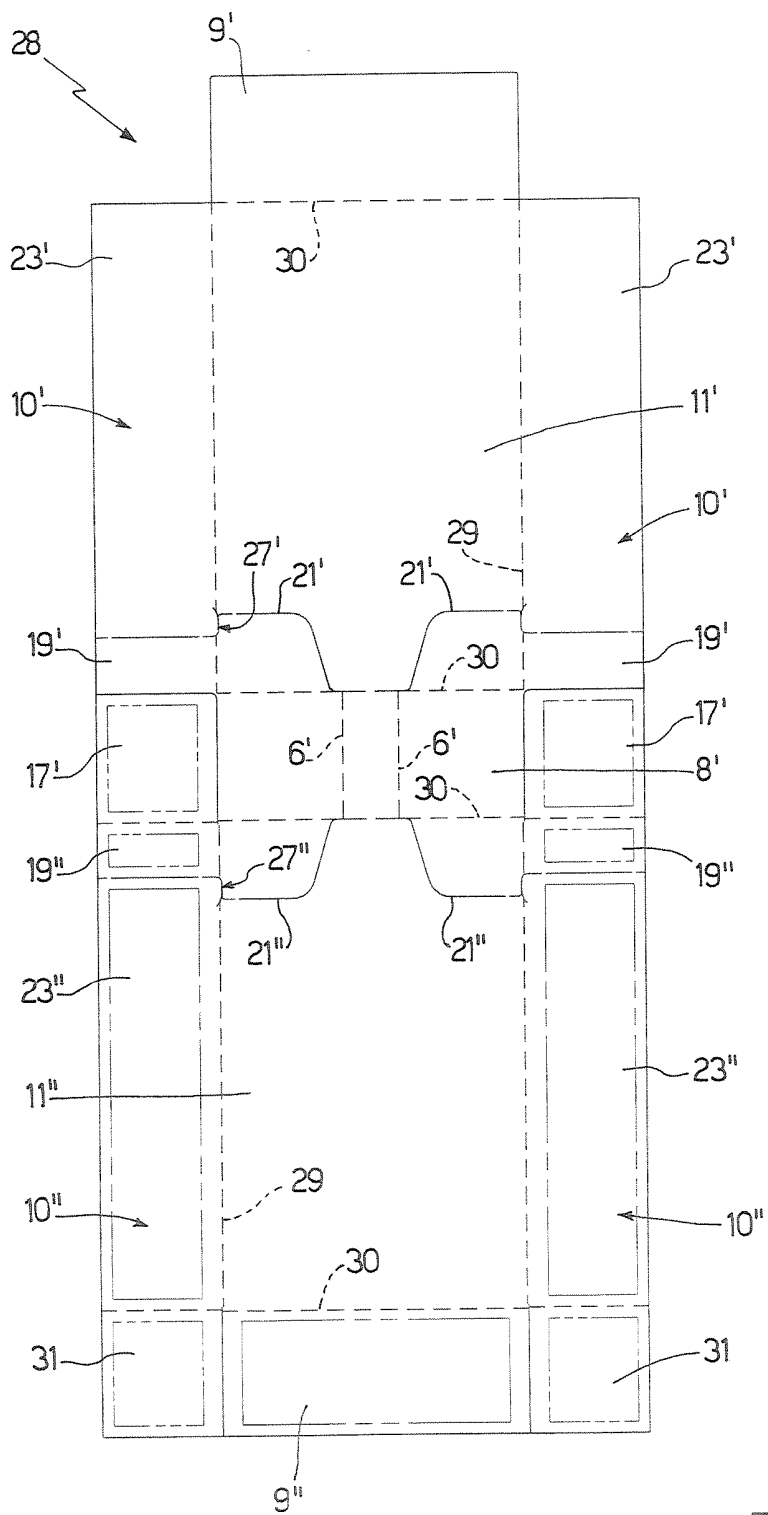


Fig.7

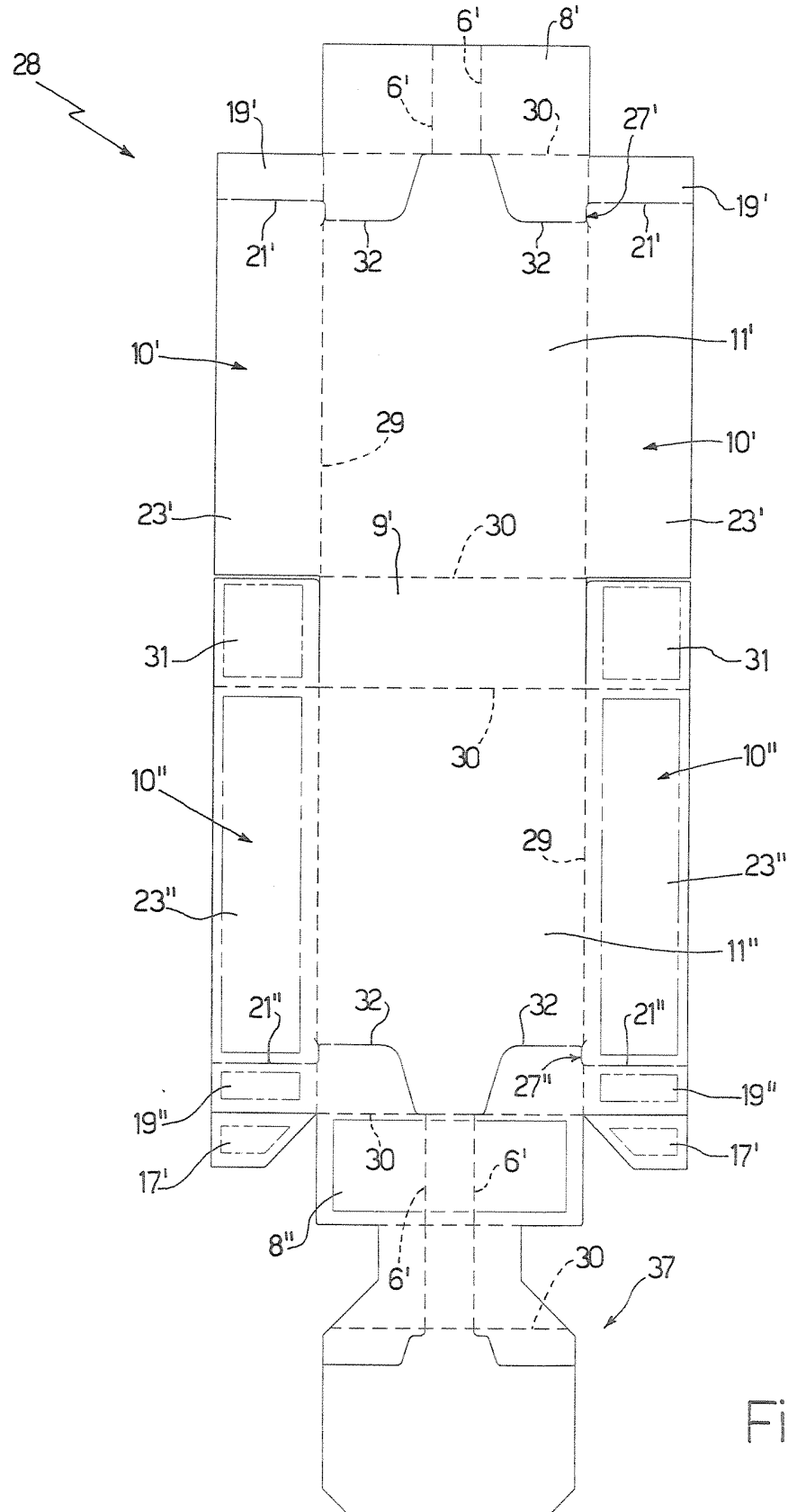


Fig.8

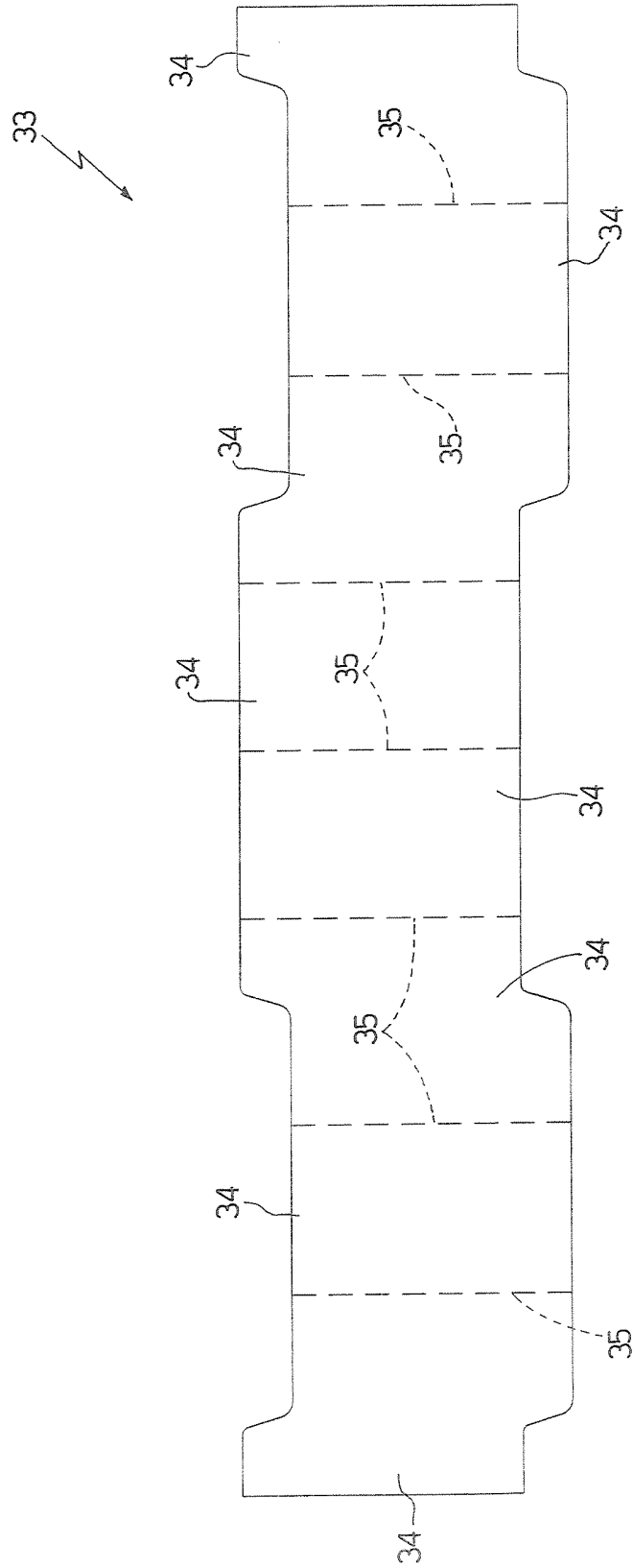


Fig.10

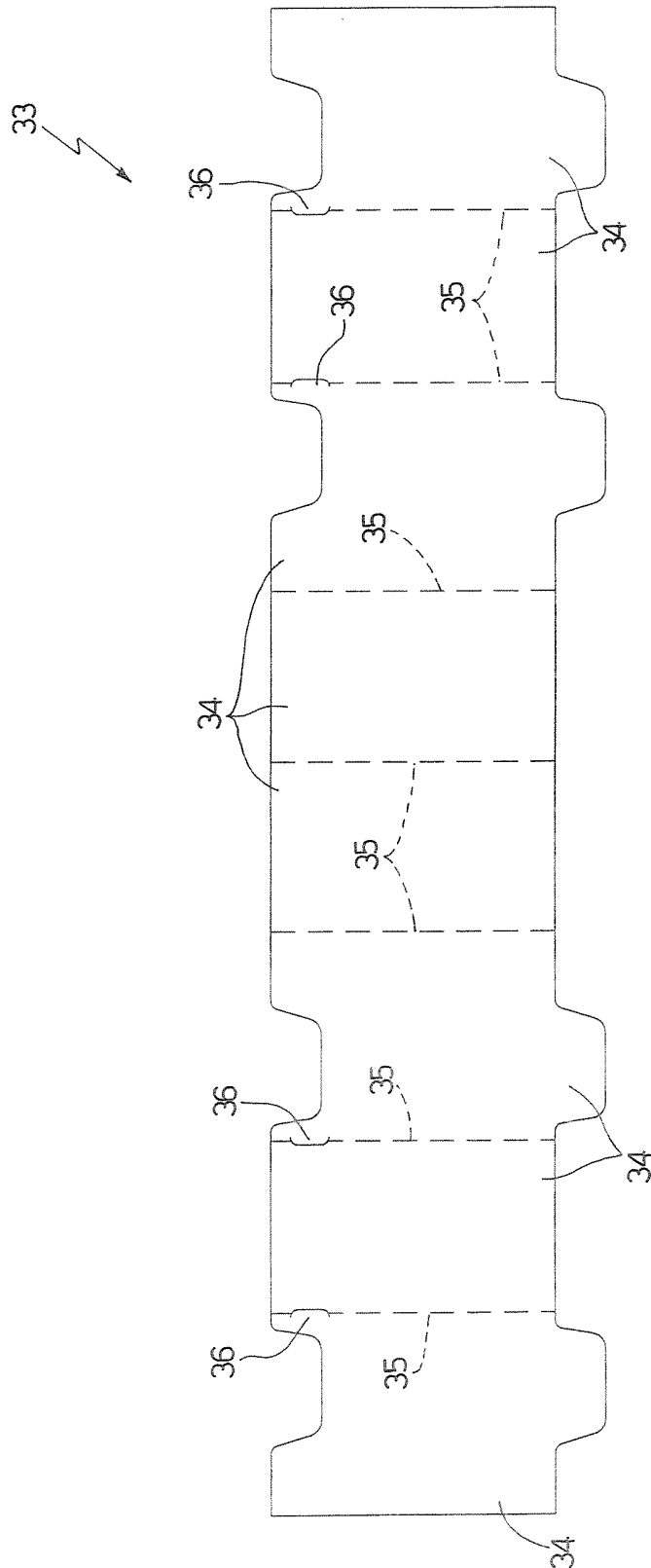


Fig.11

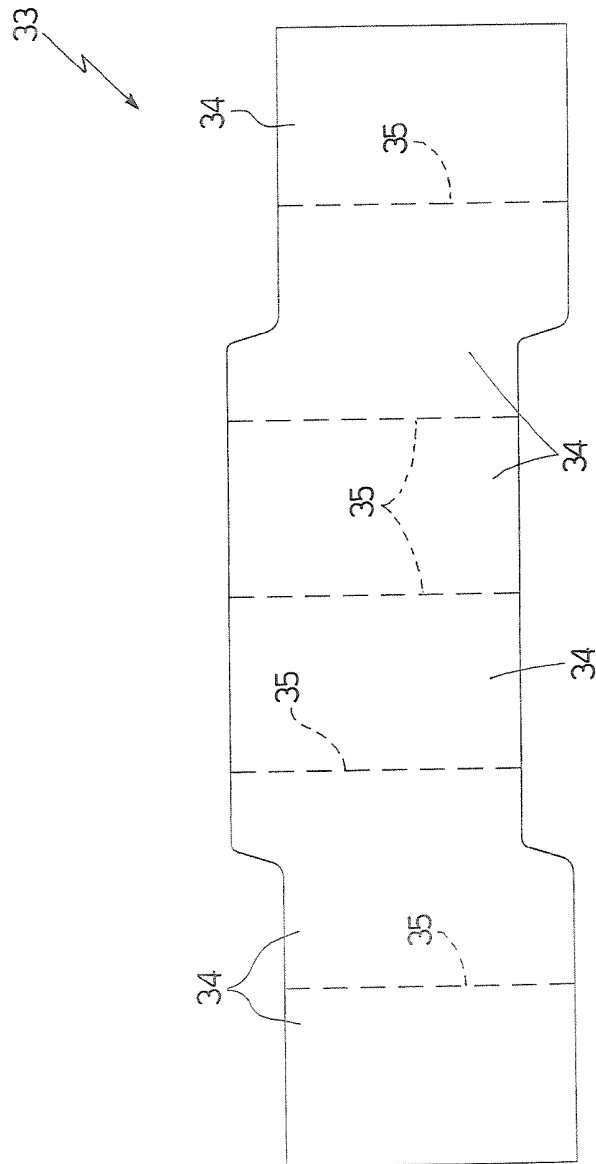


Fig.12

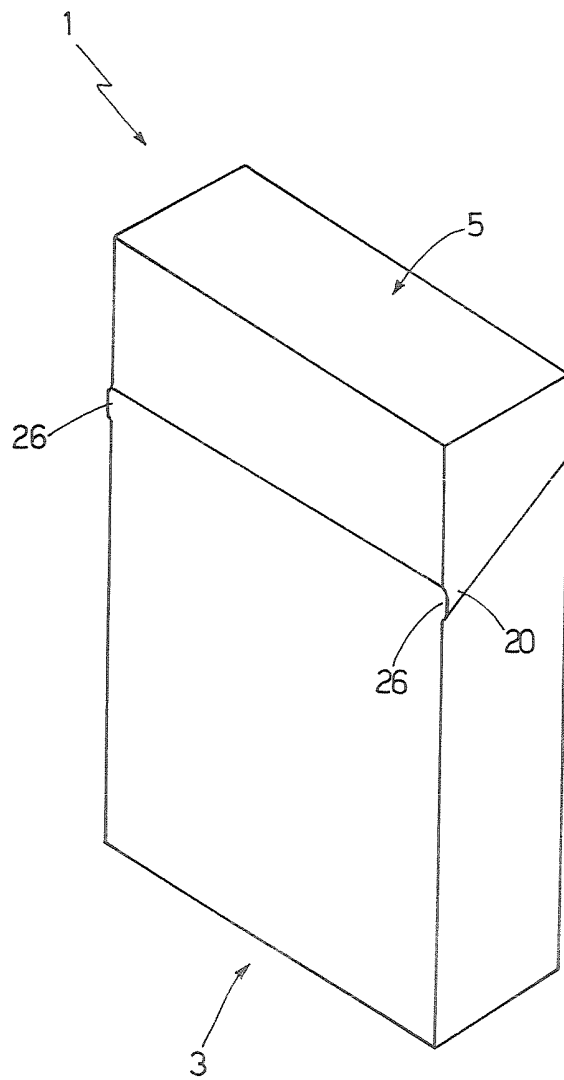


Fig.13

INTERNATIONAL SEARCH REPORT

International Application No
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A. CLASSIFICATION OF SUBJECT MATTER B65D5/42 B65D85/10 B65D5/66		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols) B65D		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2 848 152 A (SR. CLARENCE H. GEIGER,) 19 August 1958 (1958-08-19) column 1, line 15 - line 24 column 2, line 57 - line 65 column 3, line 13 - line 25 column 3, line 59 - column 4, line 6; figures	1-8, 11-18, 23
Y		9, 10, 19-21
X	US 3 963 173 A (STONE ET AL) 15 June 1976 (1976-06-15) column 9, line 33 - line 59 column 10, line 39 - line 42; figures 19-25 ----- -/--	1-8, 11-18, 22, 23
<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex.		
° Special categories of cited documents :		
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Date of the actual completion of the international search 14 November 2005		Date of mailing of the international search report 22/11/2005
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer Gino, C

INTERNATIONAL SEARCH REPORT

International Application No

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