A pack (1) for smoking articles such as cigarettes has a sealed enclosure of barrier material, with a resealable access aperture to the enclosure. A cover (7) over that aperture has on all its openable edges a permanently tacky surface overlapping over the barrier material there. The cover has a non-adhesive tab (10) to assist opening.
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PACKAGING FOR SMOKING ARTICLES

This invention relates to packaging for smoking articles such as cigarettes, cigars and cigarillos. For convenience and brevity these will be referred to herein as cigarettes.

The object of the present invention is to provide packaging for cigarettes which acts as an effective barrier against ingress and egress of humidity or ingress of contaminants during transport and storage of the packaged cigarettes, but which also allows maintenance of that effective barrier property even after the package has been first opened by the user. In other words, we are providing a resealable barrier layer in cigarette packaging.

The provision of barrier layers either as an inner wrap of a cigarette carton or an outer wrap or both is commonplace. Provision is more or less essential if cigarettes are to have any sort of commercial shelf life in zones having hostile climatic conditions, especially in high temperature, high humidity zones.

But as far as we are aware all such barrier layers so far provided, whether internal or external, have been destroyed in their barrier function when the user first opens the package. Typically, an outer
barrier layer has a tearstrip which the user operates to separate halves of the outer wrap which is then discarded, or a barrier layer within a cigarette carton (or surrounding a soft wrap package) although not usually discarded once the package is opened has a permanent opening formed in it by the user when he first gains access.

US-A-4763779 shows a tin-foil inner wrapping for a Laubé-type box where a flap of that wrapping may be brought down over an access aperture, and overlap the edges of the aperture. It may have a "peel-seal" connection to the edges it overlaps.

In the present invention we provide a resealable sealed barrier layer by defining in the barrier layer an access aperture and over the aperture and extending beyond all of its openable edges a cover layer having a permanently tacky surface engageable with the barrier material adjacent to the edges of the aperture. The cover layer will usually be a discrete layer applied to the barrier layer.

The aperture may be defined by lines of weakening in the unopened package, not penetrating through the thickness of the material, or by actual cuts, with or without interruptions. The aperture in the barrier layer will preferably be defined by a tab defined by a line or lines of weakening or cuts and by an unweakened or uncut edge, this forming a hinged flap
of the barrier material.

The cover layer with a permanently tacky surface may itself be formed of barrier material, even if discrete from the main body of such material, but it may be quite satisfactory to use for that purpose a paper or other sheet material which preferably will be continuous from edge to edge, that is to say, across the whole extent of the aperture in the barrier layer plus its overlapping edges.

The layer may have a tab or other handle which is free of the permanently adhesive material so as to allow for easier handling. The layer may be in the form of a label, a coupon or an excise stamp, for example.

The preferred material of the barrier layer will either be a plastics/metal foil laminate or a metallized plastics material since either of these offer outstandingly good barrier properties.

The barrier layer may be continuous over one minor end of the pack or charge, and have side seams along both minor sides of the pack and an envelope or similar fold over the opposite minor end. The barrier layer need not be applied in that manner - it can equally well be applied so as to be continuous over one minor side and sealed over both minor ends and one minor side.

Various patterns of heat sealable portions of
barrier layer, achieved by the application of glue, lacquer or the like to the barrier material, can when heat-sealed with each other or with the barrier material form an enclosure which is as near as possible hermetic.

It is desirable that a non-adhesive tab is present at one edge of the adhesive layer, to aid opening and reopening of the pack.

It is preferable that the tab does not lie flush with the barrier layer, so that it may be more easily gripped when opening/reopening the pack. This may be achieved by various means, for example by folding in the region where the tab joins the adhesive portion of the cover, by applying inks or other media which upon drying distort the material of the cover, or by distorting the cover by embossing. More preferably, the tab is folded back to lie against (the non-adhesive surface of) the cover and then releasably held in place by minor amounts of an adhesive.

A resealable pack may be included in a Laubé, or flat, box. Such boxes are well known in the art and are generally rigid, being made of thick card or similar material, and hinged along a minor edge of a major face, or along a major midline of a minor face.

In such embodiments, the aperture in the barrier layer is preferably located on the front surface of the pack (that is, the major surface that is revealed when the
Laubé box is opened) and the top surface (that is, the surface which is furthest from the hinge of the Laubé box). It may be desirable for the cover to have a tab at the top of the pack, which tab may be arranged to protrude between the lips of the Laubé box. The barrier layer may be placed around the bundle of cigarettes either to produce a side-seamed enclosure or one seamed over the front and/or back major faces of the bundle.

Furthermore, flavourant may be provided in the permanently tacky adhesive used for resealing the barrier layer. Thus, a quantity of the flavourant will be released each time the cigarettes are accessed. This contrasts with previously known systems (such as described in US-A-5249676) which release only a single burst of flavourant, on initial opening of the packaging.

In the present invention, the flavourant is preferably micro-encapsulated, each action of disengaging the tacky surface from the barrier layer causing a proportion of the micro-capsules to be ruptured, and so release their contents. US-A-4720423, again relating to a one-off flavourant release system, describes how flavourant-bearing micro-capsules may be incorporated into adhesive.

By flavourant is meant any substance which releases, produces, neutralises, masks or alters
odours, for example a perfume or deodorant.

Flavourant may alternatively or additionally be incorporated into an integer which is included within the cigarette packaging, inside the barrier layer. The integer may be of a porous substance, for example a pad, a paper sheet or may be the card inner frame of a semi-rigid pack. Alternatively, the flavourant may be encapsulated or included in a sachet, the capsule or sachet being included within the packaging.

This flavourant may permeate the cigarettes included within the packaging, so as to affect the taste or odour of smoke produced when smoking the cigarettes. A preferred such flavourant is menthol.

Flavourant may be incorporated into both a resealable adhesive layer (outside a barrier layer) and an insert (inside the barrier layer). The flavourants may be the same, so that their effects reinforce, or different, for example to provide one flavour on opening the packaging and a different flavour in the cigarette.

We also disclose an inner frame particularly suitable for the resealable packaging of this invention. Such an inner frame has panels which are foldable relative to each other to form four at least partial faces of a cuboid including one major face, and additionally has a flap or flaps which form(s) an incomplete fifth face of the cuboid.
In a preferred configuration, the frame has a major panel, two elongate side wings and a (bottom) end panel, and two flaps. The long edges of the side wings and the end panel are the major edges and a minor edge, respectively, of the major face. The flaps are at the top ends of the side wings. Thus, upon folding, the frame forms a major face, two long side faces and a bottom end face of a cuboid, with the flaps forming two parts of an incomplete top end face.

It is preferable that the major face is not a complete rectangle, but has a recess in the top edge. When such a recess is present, it is further preferable that the end panel is shaped so that two blank, unfolded, frames placed end-to-end tessellate (i.e. can lie next to each other without overlaps or gaps) thus minimizing the amount of material needed.

When the inner frame is used in a resealable pack, the aperture in the barrier sheet through which cigarettes may be accessed preferably overlies the region between the flap(s) and the recess in the major panel. The flap(s), being supported on any cigarettes remaining in the pack (because it is preferable that the length of the side edge is similar to that of the cigarettes), provide(s) an anvil which supports the barrier layer adjacent the aperture, allowing the adhesive cover to be pressed firmly against the barrier layer, to aid resealing.
Of course, inner frames may have single folds between the panels (producing sharp edges) or double folds (producing bevelled edges). Alternatively, the sides of the frame may be rounded, for example to be used in a so-called "oval" pack.

The present invention is not limited to single bundles of cigarettes. For example, multiple bundles may be enclosed in the resealable barrier material and then inserted together into a single outer shell.

Alternatively, multiple bundles, each within an inner frame, may be overwrapped together in a single pack-forming sheet, to form a semi-rigid pack containing multiple bundles.

Flavourant may be added to the packaging in the form of so-called "scratch and sniff" panels. That is, the flavourant may be coated on the packaging in a form (for example micro-encapsulated) which allows release of the flavourant when abraded. Such scratch and sniff panels are well known, for example in magazine advertisements for perfume.

The seams of the barrier layer may be formed using glue or heat-sealable strips which are added to the barrier layer for example, by being printed on. This finds particular applicability when the barrier layer is a metal/paper laminate or metallized paper. However, one or more external faces of a plastics laminate or foil may be of heat-sealable material.
Various embodiments of the invention will now be described with reference to the accompanying drawings, wherein:

Figure 1 is a perspective view of a generalised embodiment of the invention;

Figure 2 shows an inner frame of a first embodiment;

Figure 3 is a diagrammatic end view of the inner frame of Figure 2 assembled around a charge of cigarettes;

Figure 4 is a plan view of a barrier layer and label to be wrapped around the inner frame of Figure 2 together with its charge of cigarettes;

Figure 5 is a view from behind and below of the packaging formed by that first embodiment;

Figure 6 is a face view of the inner frame of a second embodiment;

Figure 7 is a diagrammatic end view of the inner frame of the second embodiment assembled around a charge of cigarettes;

Figure 8 is a plan view of the barrier layer of the second embodiment;

Figure 9 is a view from behind and below of a packaging formed by the second embodiment;

Figure 10 is a plan view of a label of the second embodiment;

Figure 11 indicates the assembly of that label
with a top view of the barrier layer of the packaging;

Figure 12 shows the inner frame of a third embodiment;

Figure 13 show a barrier layer for that third embodiment;

Figure 14 is a face view of a label for the third embodiment and Figure 15 shows an assembly of that label with a top view of the packaging of the third embodiment;

Figures 16 and 17 show respectively face and assembled view of fourth forms of label;

Figure 18 shows a fourth and preferred embodiment of inner frame;

Figure 19 shows the fourth embodiment made up, with end flaps to act as anvils against resealing pressure.

Figure 20 shows a fourth embodiment of cut blank of barrier material;

Figure 21 shows a front view of the fourth embodiment when made up into a container;

Figure 22 shows a top plan view of the fourth embodiment when made up into a container, with a small portion cut away;

Figure 23 shows one side view of the fourth embodiment when made up into a container;

Figure 24 shows the other side view of the fourth embodiment when made up into a container;
Figure 25 shows a fifth embodiment of cut blank of barrier material;

Figure 26 shows a front view of the fifth embodiment when made up into a container;

Figure 27 shows a top plan view of the fifth embodiment when made up into a container, with a small portion cut away;

Figure 28 shows one side view of the fifth embodiment when made up into a container;

Figure 29 shows a second side view of the fifth embodiment when made up into a container;

Figure 30 shows heat-sealable areas on an inner face of a barrier blank; and

Figure 31 shows heat-sealable areas on an outer face of a barrier blank.

Figure 1 shows a general embodiment with a rigid card pack 1 with a "flip-top" lid 2 containing a batch 3 of cigarettes packaged in a barrier layer. The bounds of an aperture for allowing access to the cigarettes are indicated by parallel dotted lines 4 extending from the rearside of the batch 3 where a hinge line is formed on the edge 5 across the top of the package and down the front as far as a third line 6 parallel to hinge 5. As will be seen and as is clearly apparent other shapes of that aperture are possible; furthermore the hinge line of the lid need not be at the back of the package. The barrier layer which forms
the package may be made for example of metallized plastics or of a plastics/metal foil laminate. Over its aperture lies an element, here in the form of a label 7, which is a layer of material having on its undersurface nearer to the barrier layer a permanently tacky material. The permanently tacky material may cover continuously or intermittently the whole of that undersurface, or a permanent bonding adhesive may be on the portion of the undersurface which does not overlie the edges of the barrier layer, but where the label 7 extends at edges 8 and 9 beyond the aperture edges 4 and 6 the undersurface must be provided with that permanently tacky material.

Beyond one edge of the label 7 is a tab 10 which is at least partly free of the permanently tacky material so that it may be flicked up by the user and used to pull the label to open the package.

On first use, the aperture edges 4 and 6 may have been defined by lines of weakening in the barrier material or by actual cuts. If by cuts, there preferably will be interruptions, for example aligned with front corner 11 of the package and/or in the corners between edges 4 and 6 of the aperture, so that on first lifting of the tab 11 the user feels that a separating action has occurred. The user is then free to remove cigarettes from the package through the aperture and after having done so may reseal the
aperture simply by bringing down the tab so that the edge portions 8,9 re-adhere to the adjacent portions of the barrier layer material. The flap of barrier material formed by the separation along those lines when the tab 10 was lifted is returned to its previous position and although there will now be a line of separation in that barrier layer it is covered by the adhered edges 8,9 of the label.

To ensure as far as possible efficient adhesion an inner frame within the package offers a reaction surface underneath the barrier layer against the resealing pressure exerted on edges 8 and 9.

In the embodiments described the package 3 is a separate entity removable from the outer carton. The latter may be of any suitable type and in particular may be of the so-called "shell and slide" type wherein the package may be pressed from one end of the carton to protrude from the other for the purpose of exposing cigarettes for more ready access by the user.

Furthermore, the package above, and those to be described, may any of them be an independent entity, that is to say, may be sold without a rigid carton surrounding them, at least if, preferably, means such as a conventional clear celluloid overwrap were provided to provide further protection and prevent accidental disturbance of the tab 10. The resealable barrier layer may also be over a rigid carton.
Specific embodiments both of frame and of resealable barriers will now be described with reference to the remaining drawings. Any of these embodiments can be used in any of the contexts mentioned above and (in principle) with any other of them.

In Figure 2 we see an inner frame 15 of card which has a front panel 16, two side wings 17 and a top flap 18. Score or fold lines 19,20 form corners as seen in Figure 3 when the wings 17 are folded to right angles with the panel 16. Top flap 18 is also folded to right angles. It can be seen that when the inner frame has been folded for assembly in that way there is an aperture 21 formed through which most of the charge 22 of (here) twenty cigarettes will be accessible as diagrammatically indicated in Figure 2. The aperture 21 extends to a base edge 23 in the front panel.

Figure 4 is a face view of a sheet 25 which is to form a barrier layer overwrapped around the charge of cigarettes contained in the inner frame 15. Fold lines 26 show where the sheet will be brought round to overlie side panels 17 of the frame and dotted lines 27 show where it will be brought round to overlie the top flap 18. At the bottom of the package formed around the inner frame and its charge (an operation which can be carried out on standard machines), and adjacent the top of the package diamond folds 28,29 are formed as
indicated in Figure 4, and this and side seams are sealed in any suitable manner, as for example in reciprocating, sliding, tractor or band- or induction-sealing mechanisms.

An aperture in the barrier layer is defined by slits 30,31. There is a discontinuity between these slits at 32. The slits 30,31 which are pre-cut through the whole thickness of the barrier material correspond to the side edges of the aperture 21 in the inner frame and to its base edge 23 in the front panel respectively. On the line 27 a hinge portion 33 is formed in an uncut area.

To maintain the flap formed by the cuts 30,31 securely in position and to prevent all but negligible transfer of humidity through the barrier, a layer 34 is applied over the aperture formed in the barrier layer. This is in the form of a label, usually of a film of plastics material, of which the undersurface is coated with a permanently adhesive, that is to say a permanently tacky, material so that it adheres to the barrier layer and can readhere to it. In this embodiment the label extends beyond all edges of the aperture i.e. both those formed in the barrier layer by slits 30,31 and that formed by the hinge 33, by marginal portions 35 on the sides, 36 on the bottom and 37 on the back respectively. If the slots 30 were to terminate short of line 27 it would not be necessary
for portion 37 to be on the back of the package.

Beyond the portion 36 is a tab 38 which is free of the adhesive material.

As can be seen the package once made up can be inserted into a carton and used in a manner generally described in relation to Figure 1. When the user first lifts the tab 38 he should get a distinct signal as the discontinuities 32 are severed for the first time. When he has extracted one or more cigarettes he can reseal the package by applying the edge portions 35 and bottom portion 36 once more to the surrounding barrier material, with edge portions of the frame 15 around the aperture 21 acting as an anvil against the pressure exerted. Provided that the barrier layer is correctly repositioned, something which is assisted by the hinge portion 33, the integrity of the barrier layer after opening and resealing should be as good as it was before.

In the second embodiment as seen in Figures 6-11 an inner frame 15' is dimensioned for a smaller charge 40 of cigarettes, here ten, but is in other respects identical to inner frame 15. Like parts have been given like reference numbers and do not need further description.

The barrier layer used in the second embodiment is however different in detail, though identical in function. The sheet 41 in Figure 8 is to be folded
integrally around the base of the inner frame and charge and to be sealed only at its sides and top. It has front and back forming panels 42, lines 43 indicating where the barrier layer will turn around the base of the charge as indicated in Figure 9.

Lines 44 indicate where side panels 45 are defined which will be sealed together in a seam up each side of the formed package.

As the layer is brought around the package line 47 overlies and is brought into register with line 46, with lines 48 and 49 indicating the position of turn around the front and the back edges respectively of the top of the charge.

An aperture in the barrier layer is formed by a slit 50 in the shape of a narrow-mouthed U the legs of which extend just across line 47. There may be discontinuities in the slit such as discontinuity 32 described with reference to the first embodiment. Discontinuous slits 51 cross the line 46. The distance between slits 51 is different from that between two parallel portions of slit 50 where the two will overlie in the assembled package (see Figure 11). This avoids a need for exact registration of slits in the respective ends of the sheet when they are brought together in the wrapping and sealing operation.

In the front panel-forming portion 42 of the laminate the aperture defined by the slit 50 widens and
parallel portions 52 correspond in position to the edges 21' of the aperture in the inner frame 15'.

A label 55 of paper has an undersurface which is permanently tacky and has a base part 56 which covers over most of the upper surface of the package.

A flap part 57 of the label extends over and beyond the edges of the flap defined by the slit 50 in the barrier layer, providing edge portions 58, 59 and 60 for adhesion to the adjacent parts of that barrier layer as indicated in Figure 11. As in the first embodiment there is a tab 61 free of tacky material, to assist the user's handling and resealing of the formed package.

In a third embodiment seen in Figures 12 to 15, the inner frame seen in Figure 12 is identical with inner frame 15 of Figure 2 and will not be described further.

Sheet 65 seen in Figure 13 is very similar to sheet 41 of Figure 6 but a different conformation of slit and hence of aperture is shown. Here, an aperture for the package to be formed by this sheet is defined by parallel straight line slits 66 traversing lines 47' and 49' and which after an interruption 67 are continued into a base slit 68; the slits together define a flap openable on a notional hinge formed by the label in the region behind lines 46'. Interrupted slits 51' traverse line 46' and are at a different
spacing from lines 66.

The label seen in Figure 14 is assembled to the formed package the top of which is shown in Figure 15: front and rear flaps of the package are sealed together in the region 69 to form effectively a single flap. An inner frame top flap (if provided) could be adhered to the barrier layer. In conformation and function the label is similar to the label described with relation to Figures 10 and 11 and is designated 55'.

Figures 16 and 17 show a further conformation of label 70 suitable for any of the embodiments so far described in which, instead of a base portion such as 56 or 56' in Figures 10 or 14, the flap here 71 which is to cover over and extend beyond the aperture-forming portion of the barrier layer is except for its non-tacky flap 72 flanked on both sides as well as in its hinge region by permanently tacky label material 73,74.

Labels such as those shown in Figs. 10-17 may have interruptions in the slits defining their flaps so as to provide a tamper-indicating function. Such interruptions may also assist in machine feeding of the labels.

Figures 18 and 19 show an inner frame usable with any form of barrier layer described and has the advantage of end flaps on the top face. An inner frame 101 as shown in Fig. 18 is formed from a blank sheet of stiff card or similar foldable material. A major panel
102, which is generally rectangular, has elongate rectangular side wings 4 extending from the two major edges 106, the long edges of the side wings being co-extensive with the major edges 106. A generally rectangular end panel 108 extends from a minor edge 110 (the "bottom" edge) of the major panel, the long edge of the end panel being co-extensive with the bottom edge. At the top ends of the side wings are small rectangular flaps 12, which are effectively continuations of the side wings, along the top edges 14 of the side wings.

Fig. 19 shows the inner frame folded inwardly along lines 106, 110, 114, the panels and wings 102, 104, 108 forming four faces of a cuboid, the flaps 112 forming two ends of an incomplete fifth face.

The major panel 102 is not a complete rectangle, having a recess in its top edge. The bottom panel is shaped to match the recess, so that, as can be seen from Fig. 18, two unfolded frames laid end-to-end would tessellate.

In the resealable semi-rigid pack the major face forms the front of the pack, with the aperture for cigarette access overlying the recess in the major face and the gap in the top face between the two flaps. The two flaps 112, when supported by cigarettes remaining in the pack, provide an anvil against which the adhesive cover of the resealable barrier layer may be
pressed to ensure good resealing. The length of the major edges of the major face of the major panel 102 is similar to that of the cigarettes to be contained, so that end cigarettes supported, and may be gently squeezed longitudinally by, those flaps by virtue of the latter being wrapped by the barrier layer.

A flavourant-bearing integer can be included inside the barrier layer, for example a sachet, capsule or porous sheet. Alternatively the inner frame can be made of card on which is coated or in which is included a flavourant, e.g. menthol.

Microcapsules bearing flavourant can be included in the permanently tacky adhesive so that flavourant is released each time the cigarettes are accessed. A suitable adhesive is available from Sessions of York, Huntington Road, York Y03 9HS, England.

Figure 20 shows a cut blank for forming a barrier seal around a charge of smoking articles, usually contained in an inner frame. This blank is generally applicable in all the situations envisaged above and may be made of any of the materials mentioned there, but differs in that it is designed to be applied by folding around one minor side edge of the charge and of any inner frame rather than around one minor end.

The blank has major panels 201 and 202 which are respectively to be front and rear panels of the
made-up package. An intermediate panel 203 will be continuous around one of the minor side edges of the charge. End panels 204 and 205 will overlie each other on the other of the side panels of the charge and will be heat sealed together in a seam.

To one edge of panels 201 to 205 are respective end flaps 206 and 207 on the major panels and gussets 208, 209 and 210 on the minor panels. First, end panels 206 and 207 are folded in and gussets 208, 209 and 210 are then folded out. The end panels and gussets are then sealed, usually, as with the side seam between panels 204 and 205, by heat sealing, and then the gussets are tucked to lie along the side panels, where they may be tacked in position.

At the other edge of the panels 201 to 205 are other end flaps and gussets 210 to 214 respectively which correspond generally to flaps and gussets 206 to 210 but which, in flaps 210 and 211, are slit so as to form an openable access flap for the user of the pack to gain access to its contents.

Flap 210 is interrupted by parallel cuts 215 which start just short of the free edge of the flap and extend into the main front panel 201 to a narrow bridge 216. A U-shape cut 217 extends from one bridge to the other in the main panel 201.

In end flap 211 parallel cuts 218 extend to the potential fold line which divides panel 202 from flap
211 being there brought round in a J form at 219.

Adjacent to the extreme edge of the flap 211 are bridges 220 and beyond bridges 220 short final cuts 221 co-linear with cuts 218 and extending to the free edge of the flap 211.

Figure 21 shows how the main panel 201 and the cuts 215 and 217 and bridges 216 may appear when the pack is made up. Of course, since the pack is resealable the cuts will not be visible since they will be overlaid by the resealable permanently adhesive layer. Furthermore, the pack may be contained within an outer carton of any suitable type and/or be overwrapped.

Figure 22 shows a top view of the barrier enclosure when made up around a charge, flap 210 having been heat sealed in the region 222 over flap 211. It can be seen that the spacing apart of cuts 15 is slightly greater than that of cuts 218 so that they do not coincide in the made-up pack, there thus being continuity of barrier action. Flap 210 has been cut away somewhat to show the position of bridge 220 between cuts 218 and 221.

Figure 23 shows a side seam heat sealed region 223 between side flaps 204 and 205, with gussets 209, 210, 213, 214 forming folds 224, 225 at the top and bottom ends of that minor edge of the pack.

The opposite minor edge as seen in Figure 24
shows the continuity of the barrier material around it and grocer's folds 226, 227 formed by gussets 208 and 212.

In the fifth embodiment of blank, seen in Figures 25 to 29, different folding means are provided, giving a cleaner effect to the side walls of the made-up pack but somewhat restricting the width available for the formation of an access flap.

In this embodiment of blank main panels 230 and 231 are front and back panels respectively and are linked by side panel 232 which is to pass continuously round one minor side edge of the charge of smoking articles and any inner frame. In the made-up pack panels 233 and 234 overlap and are sealed to each other on the opposite minor side edge.

End flaps 235 to 239 are respectively joined to panels 230 to 234 with potential fold lines being indicated in dotted lines. In particular, diagonal fold lines 40 interrupt the more major of the end flaps, namely flaps 235 and 236.

At the other edge of the main panels 30 to 34 are end flaps 241 to 245 respectively corresponding generally to flaps 235 to 239, and with fold lines 246 corresponding generally to fold lines 240.

However, as in the fourth embodiment, the major end flaps 241 and 242 are interrupted by cut lines which are to define an access flap into a sealed
enclosure formed by this blank around a charge of smoking articles. Cuts 247 run parallel across flap 241 from closely adjacent its free edge into the main panel 230 to pips 248 from one to the other of which runs a U-shaped cut 249 in the main panel.

On end flap 242 are J-shaped cuts 250 extending from near the free edge of the flap to its potential fold line with panel 231, and leading to bridges 251 adjacent to which short cuts 252 lead to the free edge of the flap.

Figure 26 shows a front view of the blank of Figure 25 made up to a carton, and Figure 27 a top view where again it is to be noted that cuts 247 and 251 do not coincide, although in contrast to the fourth embodiment cuts 250 are further apart in their flap than cuts 247 are. Again, the drawing has a small relief in flap 241 so that the bridge 251 in cut 50 can be seen.

Figure 28 shows the side seam 253 formed between panels 233 and 234 and Figure 29 shows panel 232 on the other minor side of the charge. The clean effect on the sides can be noted, due to the formation of folds only on the top and bottom minor ends of the charge.

Further embodiments of barrier layer blank are seen in Figures 30 and 31. The outline of these is schematic only - they may, for example, be any of the
specific forms of blank described above, where the barrier is continuous over one minor end of the charge and inner frame, and an actual or potential access aperture will be formed in them.

In Figures 30 and 31 major panels 260, 261 are joined by base panel 262 and lead to top flaps 263, 264. Side and corner flaps 265 to 269 are along each side of the panels and flaps 260 to 264.

Cross-hatching shows areas 270 on the face (Figure 30) destined to be inner and 271 (Figure 31) on the face destined to be outer in the made-up pack are areas of heat-sealable lacquer or glue; alternatively heat-sealable areas of a plastics composition of the barrier material itself complement each other to form a continuous seal around all seams and folds of the sealed barrier enclosure.
CLAIMS

1. A resealable pack of smoking articles including a sealed enclosure of a layer of barrier material around a charge of the smoking articles, an access aperture defined in the barrier material layer and over the aperture and extending beyond all of its operable edges a cover layer having a permanently tacky surface engageable with the barrier material layer adjacent to the openable edges of the aperture.

2. A pack according to claim 1 wherein the aperture in the sealed enclosure is defined by lines of weakening not penetrating through the thickness of the material of the barrier layer.

3. A pack according to claim 1 or claim 2 wherein the cover layer is a discrete layer applied to the barrier material layer.

4. A pack according to claim 3 wherein the access aperture is defined as a flap in the barrier material, with the discrete cover layer applied over the flap and extending beyond its openable edges.

5. A pack according to any one of claims 2 to 4
wherein the cover layer is a label.

6. A pack according to any one of the preceding claims wherein the cover layer additionally has a non-adhesive tab beyond at least part of the permanently tacky surface.

7. A pack according to any one of the preceding claims having outside the charge of smoking articles but inside the enclosure an inner frame defining a tray for the charge and having at least a major face and two side flaps at opposite parallel edges of the major face.

8. A pack according to claim 7 wherein the inner frame additionally has top flaps adjacent each lateral side of the access aperture.

9. A pack according to claim 7 or 8 which has free edges of both side flaps, at their edges remote from the major panel.

10. A pack according to any one of the preceding claims wherein the permanently tacky surface includes microcapsules of a flavourant.

11. A pack according to any one of the preceding
claims wherein the enclosure includes within it a source of flavourant.
1. A resealable pack of smoking articles including a sealed enclosure of a layer of barrier material around a charge of the smoking articles, an access aperture defined in the barrier material layer and over the aperture and extending beyond all of its openable edges a cover layer having a permanently tacky surface engageable with the barrier material layer adjacent to the openable edges of the aperture.

2. A pack according to claim 1 wherein the aperture in the sealed enclosure is defined by lines of weakening not penetrating through the thickness of the material of the barrier layer.

3. A pack according to claim 1 or claim 2 wherein the cover layer is a discrete layer applied to the barrier material layer.

4. A pack according to claim 3 wherein the access aperture is defined as a flap in the barrier material, with the discrete cover layer applied over the flap and extending beyond its openable edges.

5. A pack according to any one of claims 2 to 4
Fig. 4.
Fig. 20.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 865085/10

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)
IPC 6 865D

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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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Date of the actual completion of the international search
16 February 1998

Date of mailing of the international search report
23/02/1998

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
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