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'Improvements relating to hinged-lid packets'

This invention relates to hinged-lid packets, for example hinged-lid packets for packaging elongate objects such as cigarettes.

10 Hinged-lid packets for packing elongate objects such as cigarettes have long been known and commonly comprise a deep rectilinear body and a lid hingedly attached to a rear wall of the body. It is known for the body and the lid to be formed from a single blank and for the lid to hinge about a crease provided in the blank. It is usual in hinged-lid cigarette packets for the body and the lid to each comprise front and rear walls and side walls each comprising a panel extending from the front wall and a panel extending from the rear wall, each of which side wall panels extends for the full front-to-rear dimension of the packet.

20 The blank for such hinged-lid cigarette packets are cut or punched from a continuous length of sheet material and sometimes two or more blanks are formed from laterally adjacent portions of the sheet material.

It is an object of the present invention to provide for a reduction in the requirement for sheet material by permitting blanks to be derived from lengths of sheet material of reduced width.

It is known from, for example U.S. Patent specification No. 4,114,777 to cut blanks for hinged-lid cigarette packets from a length of sheet material where at least two longitudinal rows of blanks are formed from the

sheet material, and a reduction in the required width of the sheet material is obtained by reducing the width of the side wall panels attached to the rear wall panels of the blanks. The side wall panels attached to the front wall panels of the blanks are maintained at the full dimension, i.e. that of the front to rear dimension of the packets to be erected from the blanks. The blanks in adjacent longitudinal rows are offset such that a reduced width side wall panel of one blank is adjacent a full width side wall panel of a second blank.

The present invention provides a hinged-lid packet comprising a body and a lid hingedly attached to the body, said body and said lid each comprising front and rear walls and side walls each comprising a panel extending from the front wall and a panel extending from the rear wall, each side wall panel extending for less than the front to rear dimensions of said packet, the side wall panels of each side wall overlapping, wherein the overlapped portion of one panel of each side wall is offset inwardly to receive the overlapping portion of the other panel of the side wall. Suitably, the side wall panels of an overlapping pair are of equal width.

In order that the present invention may be clearly understood and readily carried into effect, reference will now be made, by way of example, to the accompanying drawings, in which:-

Figure 1 shows a blank of known form for a hinged-

lid cigarette packet, broken lines on the blank indicating crease lines,

Figure 2 shows a blank for a hinged-lid packet in accordance with the present invention;

Figure 3 shows a blank of a frame for use with a packet erected from the blank of Figure 2;

Figure 4 shows a perspective view, to a different scale, of the packet erected from the blanks of Figures 2 and 3, the lid of the packet being shown in an open position;

Figure 5 is a scrap view of a detail modification of the blank of Figure 2, and

Figure 6 is a scrap view of a further detail modification of the blank of Figure 2.

Referring to Figure 1, the blank there shown includes, for forming the body of a hinged-lid cigarette packet, a rectangular base panel 1 at respective longer sides of which are attached a front wall panel 2 and a rear wall panel 3. At respective opposite sides of the wall panel 2 are attached outer side wall panels 4 and 5. Similarly, at opposite sides of the rear panel 3 there are attached inner side wall panels 6 and 7, to respective lower ends of which are attached tabs 8 and 9.

The parts of the blank of Figure 1 provided for forming the lid of the packet comprise a rear wall panel 10, attached at the upper end of the body rear wall panel 3, a top wall panel 11 attached to the edge of the panel 10 further from the panel 3 and a front wall panel 12 which is

in turn attached to the panel 11. To respective side edges of the rear wall panel 10 are attached inner side wall panels 13 and 14, and attached at respective upper edges of the panels 13 and 14 are tabs 15 and 16 which are disposed at opposite ends of panel 11. To respective side edges of the front wall panel 12 are attached outer side wall panels 17 and 18, and to the edge of the front wall panel 12 further from the panel 11 is attached a front-wall reinforcing panel 19.

The lines of the cut bounding two sides of each of tabs 8, 9, 15 and 16 are made by slitting the blank without the removal of material therefrom, but for illustrative purposes these lines are shown in Figure 1 in the form of slots.

Reference will now be made to Figure 2 in which like parts have been given like reference numerals. The major difference between the blank of Figure 2, and that of Figure 1, is constituted by a reduction in the overall width of the blank. The dimension BC of the blank of Figure 2 is the same as the corresponding dimension of the blank of Figure 1. However, the dimensions AB and CD are each a third less than the corresponding dimensions of the blank of Figure 1. A further modification comprises the offsetting of outer portions 6', 7' of the inner wall panels 6, 7, and of outer portions 13', 14', of the lid inner side wall panels 13, 14. The offsetting of the portions 6', 7', 13' and 14', which is indicated by chain dotted lines, is to the extent of approximately the thick-

ness of the material of the blank.

As is shown in Figure 2, the tabs 8, 9 are attached to end edges of the bottom panel 1, rather than, as is the case with the blank of Figure 1, to lower edges of the side wall panels 6, 7. Similarly, the lid tabs 15, 16 are attached to end edges of the top panel 11, rather than to upper edges of the lid side wall panels 13, 14.

As in the embodiment of Figure 1 the lines of cut bounding tabs 8, 9, 15 and 16 and panels 13 and 14 have been shown for illustrative purposes as slots.

Figure 3 shows a blank for forming a frame 20 for use with the blank of Figure 2 in providing the erected packet of Figure 4. The frame comprises a front panel 20' having a deep recess 21 at its upper end and a corresponding lower protruding part 21'. The frame further comprises, to each side of the panel 20', side wall panels 22, 23 each of which includes a central offset portion 22', 23' respectively, the purpose of which offset portions will become apparent from the description below.

In one form of the frame, cut outs may be provided at the upper ends of the offset portions 22' and 23' of the frame 20. In Figure 3 the offset portions 22' and 23' are shown as having cut outs 22" and 23" respectively, these cut outs 22" and 23" being shown in Figure 4 in outline only in both offset portions 22' and 23'. The cut outs, in the erected pack serve to receive the offsets 13', 14' and accommodate the parts of

the tabs 15 and 16 which overlap the frame when the lid is closed, and which might interfere with the offset portions 22', 23' of the frame. The cut outs 22", 23" results in the formation of tongue-like projections on the upper edge of the frame which engage between the tabs 15, 16 and the associated sidewalls 13/17 and 14/18 respectively. Alternatively the cut outs could be provided in the tabs 15, 16 which would then each have two tongues. When the lid is closed these tongues would lie against the inner faces of the frame panels 22, 23 on either side of the offset portions 22', 23'.

In erecting the packet shown in Figure 4 from the blank of Figure 2, the body front and rear wall panels 2 and 3 are folded perpendicularly to, and to the same side of, the base panel 1. The outer side wall panel 4 is folded so as to be received by the offset portion 6' of the inner side wall panel 6, the overlapping portions of the panels 4 and 6 being adhered to each other. Similarly, the outer side wall panel 5 is folded to be received by and is adhered to, the offset portion 7' of the inner wall panel 7. The tabs 8 and 9 extend upwardly within the body part of the packet.

With the side panels 22, 23 of the frame folded perpendicularly to the front panel 20' of the frame being adhered to the rear surface of the front panel 2 of the body part of the packet.

In the erected lid the reinforcing panel 19 is folded over and adhered in face-to-face relationship with the inner face of the front wall panel 12. The top wall

panel 11 is folded perpendicularly to the rear wall panel 10 and the front wall panel is folded perpendicularly to the top wall panel 11. With the inner side wall panels 13, 14 folded perpendicularly to the rear wall panel 10, the outer side wall panels 17, 18 are folded down so as to be received by, and adhered to, the offset portions 13', 14' of the panels 13, 14. The tabs 15, 16 extend downwardly within the lid.

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As may be observed from Figure 4, the central offset portions 22' 23' of the frame side wall panels 22, 23, which are offset inwardly, serve to accommodate the inwardly offset portions 7', 6' of the body side wall panels 7, 6.

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Figure 5 shows a modification to the blank of Figure 2, the purpose of the modification being to ensure that the tabs 8 and 9 lie close against the inner surfaces of the side walls of the body part of the packet. As may be seen from Figure 5, a lower portion of the offset 6' of the inner side wall panel 6 is given a tapered profile, and the tab 8 is provided with a correspondingly shaped cut-out 8'. Thus in the erected packet the lower tapered end of the offset 6' is received in the cut-out 8' of the tab 8. A similar arrangement is, of course, provided with respect to tab 9, and the same principle may be applied with respect to the lid tabs 15, 16.

Figure 6 shows a detail view of a further modification of the blank of Figure 2, in which a modified form of lid tabs 15, 16 is provided. The blank of this

modification is otherwise unchanged although it will be understood that the blank may also incorporate the modification to the tabs 8, 9 in Figure 5.

In Figure 6 the tab 15 is in two parts 15' and 15" which are attached respectively to the inner side wall panel 13 and the outer side wall panel 17. The part 15" is separated from the top wall panel 11 by a line of cut along the edge of the panel 11, and from the part 15' by a diagonal line of cut extending from adjacent the point where the corner of the top wall panel 11 adjoins the corner of the corner side wall panel 13 to a point approximately midway along the edge of the outer side wall panel 17. The part 15' is separated from the panel 17 by a lateral line of cut extending from said diagonal line to the edge of the blank. The tab 16 on the opposite side of the blank is formed in two parts in an identical manner. In a pack erected from this modified blank the parts 15' 15" and the corresponding two parts of the tab 16 lie against the inner face of the top wall panel 11. In a further modification (not shown) the tab 8, 9 could be modified in a similar manner.

In the packet of Figure 4 the offsets of the body and lid side walls are provided in the side wall panels which extend from the the rear wall panels of the body and lid. Obviously, the offsets could be provided in the side wall panels extending from the body and lid front wall panels.

A blank similar to that of Figure 2, but being a somewhat more direct adaptation of the blank of Figure 1, may be provided by maintaining the attachment of the tabs 8, 9 to the panels 6, 7 and the attachment of the tabs 5 15, 16 to the panels 13, 14.

As will be realised, by reducing the width of both side wall panels of a side wall pair to less than the full front to rear dimension of the packet, there may be obtained an overall reduction in the width of the strip of 10 the sheet material from which the blanks are derived, whether a single or a plurality of longitudinal rows of blanks are derived from the strip material.

Although the above described hinged-lid packet is of the type having a separate, inserted frame, the same principle of side wall panel width reduction could be employed 15 in the case of a one-piece hinged-lid packet, as for example that disclosed in U.K. Patent Specification No. 1,431,173.

In British published Patent Specification No. 2031380- 20 A there is disclosed means for maintaining the lid of a one-piece hinged-lid packet in its fully closed position. This object is obtained by providing that upstanding portions of the side walls of the integral frame are received and gripped between inner and outer side wall 25 panels of the lid. This grip action is obtainable in a hinged-lid packet when constructed in accordance

with the present invention, although the upstanding portions of the frame side walls would be received between outer side wall panels of the lid and lid tabs (such as tabs 15, 16 or Figure 2) attached to the lid top wall panel.



Claims

1. A hinged-lid packet comprising a body and a lid hingedly attached to the body, said body and said lid each comprising front and rear walls and side walls each comprising a panel extending from the front wall and a panel
5 extending from the rear wall, each side wall panel extending for less than the front to rear dimensions of said packet, the side wall panels of each side wall overlapping, wherein the overlapped portion of one panel of each side wall is offset inwardly to receive the overlapping portion of the
10 other panel of the side wall.
2. A hinged-lid packet as claimed in Claim 1 wherein the side wall panels of an overlapping pair are of equal width.
3. A hinged-lid packet as claimed in claim 1 or 2 further including an inner frame extending upwardly from the
15 upper edges of the body and comprising an inner front panel and inner side panels at opposite sides of the inner front panel extending upwardly from the front and side panels of the body respectively.
4. A hinged-lid packet as claimed in Claim 3 wherein the
20 inner side panels of the frame each have a central inwardly offset portion for accommodating the overlapped portion of said one panel.
5. A hinged-lid packet as claimed in Claim 5 wherein the offset portions of said inner side panels have cut-outs



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in their upper edges for receiving the overlapped portions of the lid side panels, when the lid is closed.

6. A hinged-lid packet substantially as described herein with reference to and as illustrated in Figures 2 to 4 or Figures 2 to 4 as modified by Figure 5 of the accompanying drawings.

7. A hinged-lid packet substantially as described herein with reference to and as illustrated in Figures 2 to 4 as modified by Figure 6 of the accompanying drawings

8. A blank for forming a hinged-lid packet comprising successively a lid front wall panel, a lid top wall panel, a lid rear wall panel, a body rear wall panel, a body base panel, and a body front wall panel, a lid side wall panel extending respectively from each side edge of the lid front wall panel and the lid rear wall panel, and a body side wall panel extending respectively from each side edge of the body front wall panel and the body rear wall panel, each of which side wall panels extends laterally for a distance less than the distance across the body base panel from the edge thereof adjoining said body front wall panel to the edge thereof adjoining said body rear wall panel, outer portions of the lid side wall panels extending from either the lid front wall panel or the lid rear wall panel being offset for each to receive, on the outer face of its offset portion in the erected packet, the other lid side wall panel to the same side of the blank, and outer portions of the body side wall panels extending from either the body front wall panel or the body rear wall panel being offset for each to receive, on the outer face of its offset portion in the erected packet, the other body side wall panel to the same side of the blank.

9. A blank for forming a hinged-lid packet as claimed in claim 8 wherein the side wall panels each extend the same distance from the respective side edges of the associated wall panels.