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(54) Closure for Packets

(57) A closure arrangement for a cigarette or other packet comprises a part (5) of the end or top (4/5) of the packet which part (5) is turnable relative to the part (4) about a fold line (*a*) to open and close the body (1) of the packet. Said part (5) is flanked by first and second part-circular portions (6,6′) which bear frictionally in the finished packet against the inner surface of a tab (8) and the inner surface of a rear wall of the packet body (1), respectively. The portion (6′) is formed at one end with a projection (7) which projection tends to maintain the closure arrangement in its upright open position after being turned about the fold line (*a*).

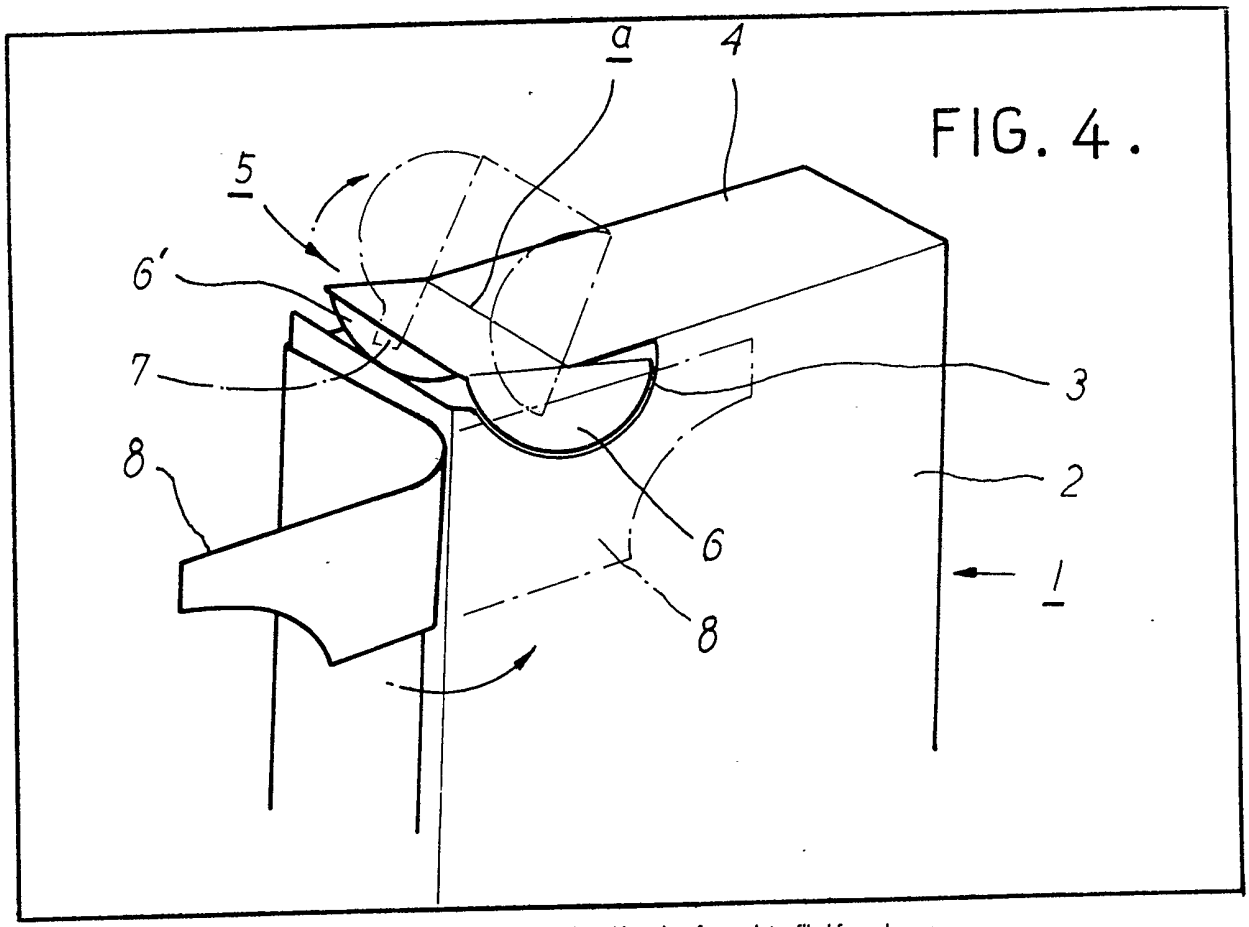

FIG. 4.

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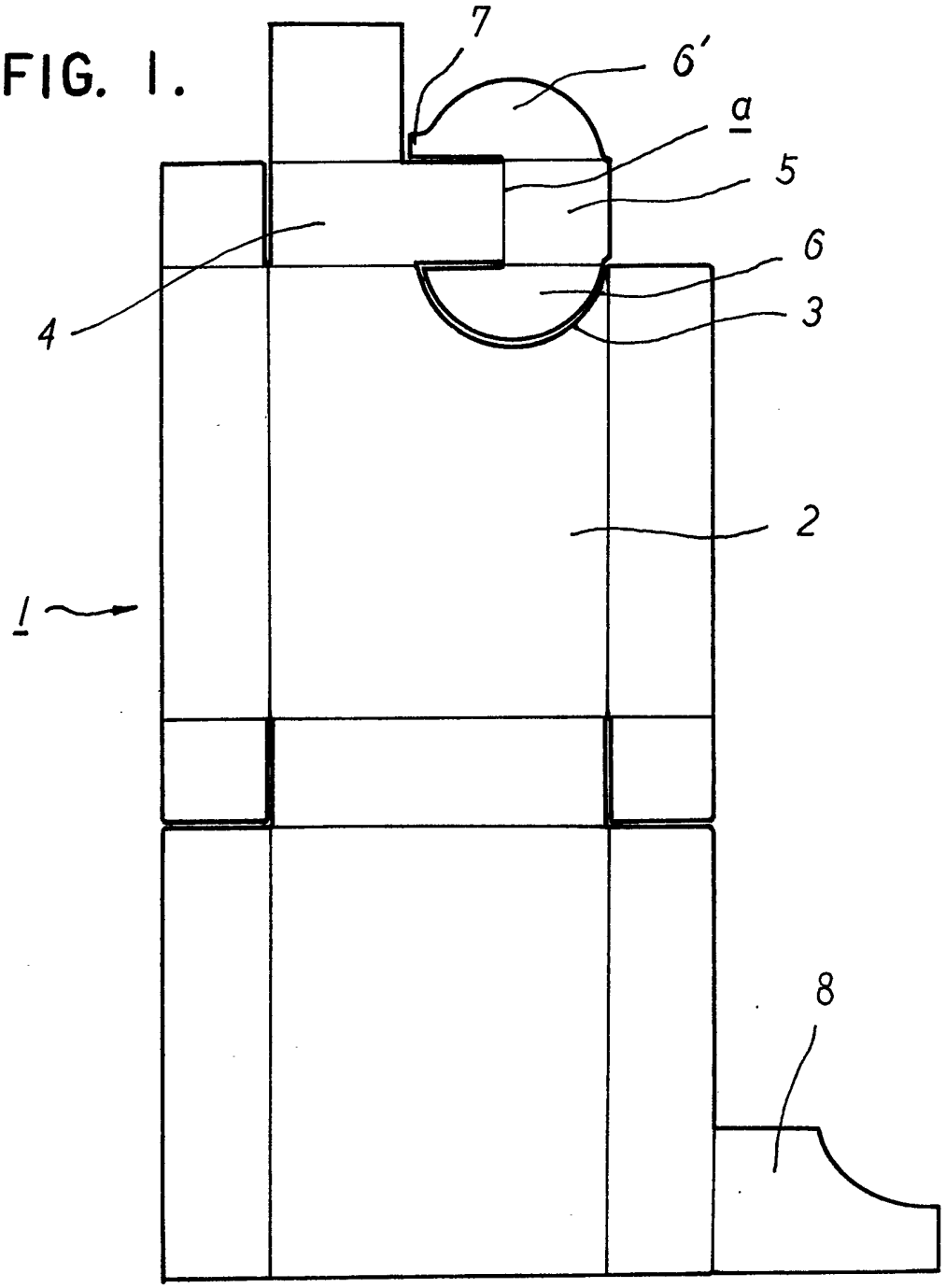
The drawings originally filed were informal and the print here reproduced is taken from a later filed formal copy

FIG. 1.



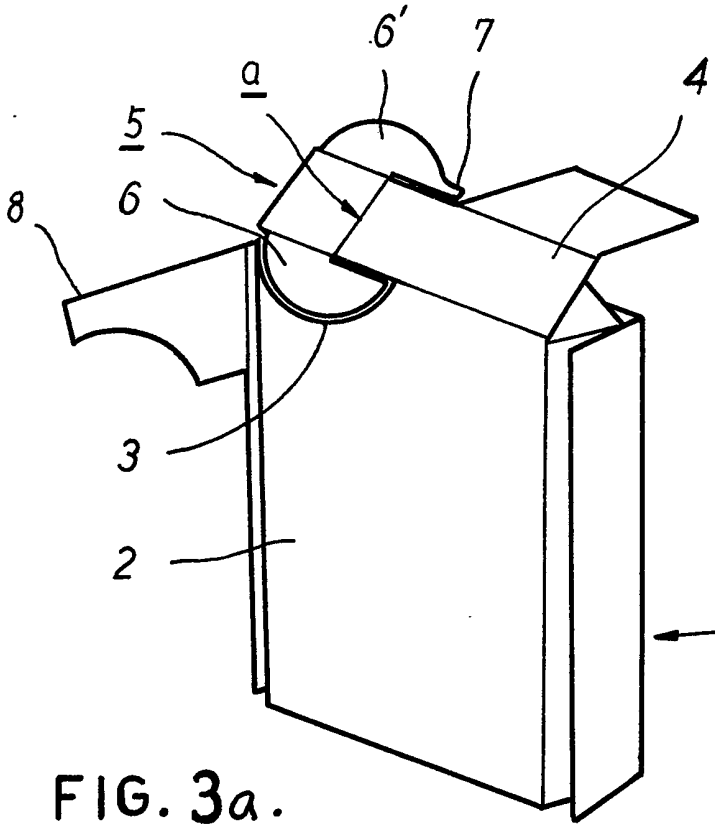
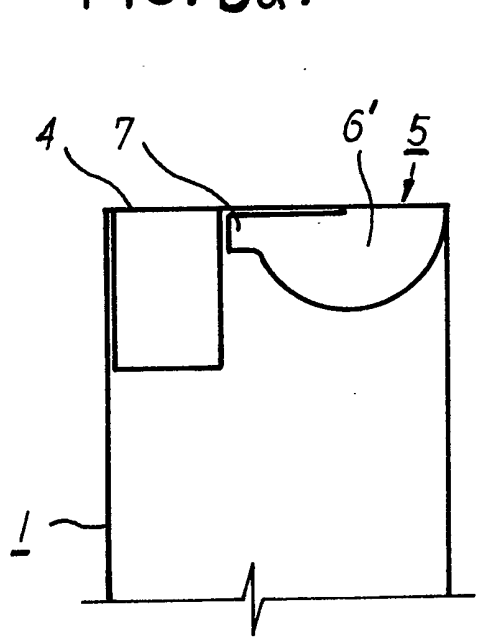


FIG. 2.

FIG. 3a.

FIG. 3b.



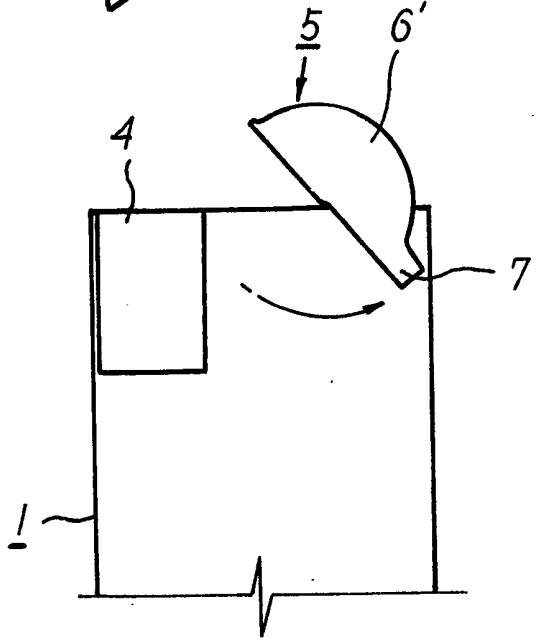
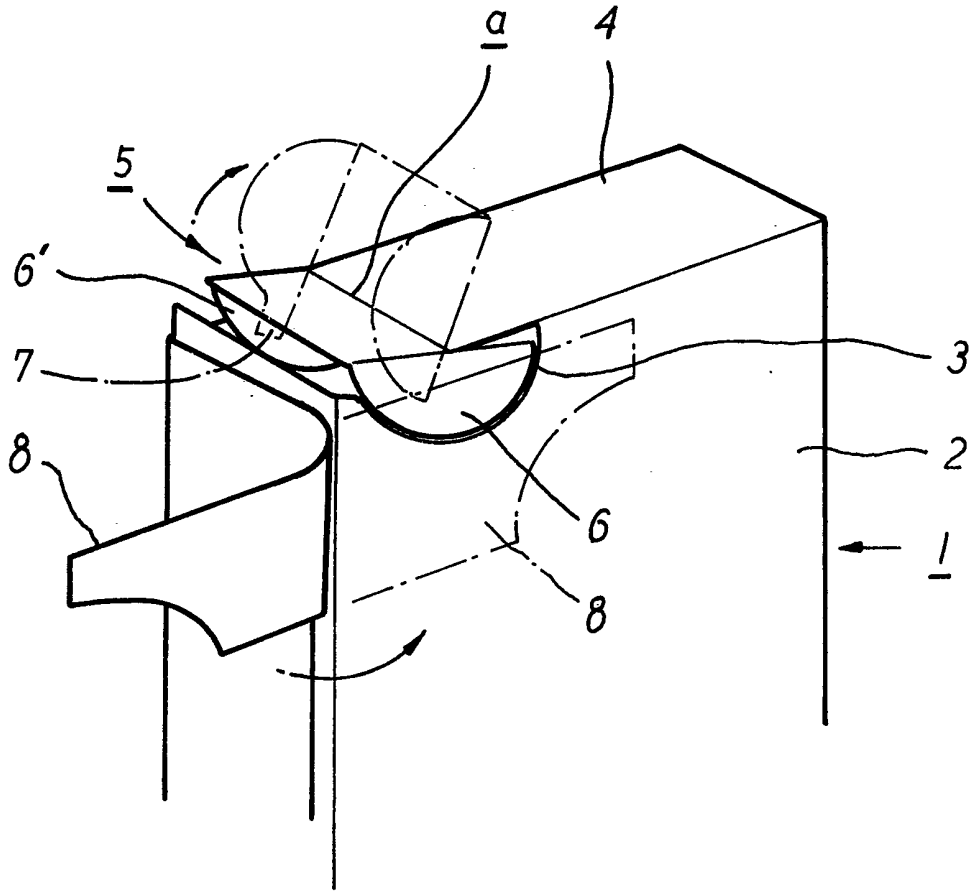


FIG. 4.



SPECIFICATION

Closure Arrangements for Packets

This invention relates to closure arrangements for packets and is particularly, but not exclusively, concerned with the opening and closing of cigerette packets.

Conventional cigarette packets of cuboid/rectangular parallelepipedic configuration are usually opened at one end, which may be considered as being the top, by cutting or tearing to form an opening sufficiently large to pull the cigarettes out of the packet. Since such packets are usually carried in the pockets of clothing, the torn or cut openings therein allow dust and dirt to contaminate the cigarettes and, conversely, tobacco particles to fall out and contaminate, and possibly stain, the clothing. Attempts have been made to overcome this difficulty by employing socalled "flip top" packets but, generally speaking, although not requiring to be cut or torn open, these packets do not remain reliably closed in the pockets of clothing and thus usually exhibit substantially the same drawbacks as have just been mentioned. The use of metallic or other rigid cigarette cases, into which cigarettes purchased in conventional packets are transferred by the buyer, avoids the disadvantages that have just been mentioned but has its own drawbacks inasmuch as hard and heavy cigarette cases can be inconvenient and uncomfortable to carry, particularly in lightweight clothing, and can cause mis-shaping, or even tearing, of such lightweight clothing.

An object of the present invention is to overcome, or at least very greatly to reduce, the disadvantages of conventional cigarette packets that have been discussed above and, accordingly, the present invention provides a closure arrangement for a packet that is of flat substantially cuboid configuration, wherein the rectangular front or rear wall of the packet body is formed adjacent one corner with an arcuate cut to produce a first crescent-shaped portion connected to one edge of an adjacent end or top of the packet, said end or top also being connected at its opposite edge to a second crescent-shaped portion and there being a fold line in said end or top about which part of that end or top cam turn with said first and second crescent-shaped portions to open and close the packet, and wherein the second crescent-shaped portion is provided with a projection which is so positioned and arranged that it will tend to maintain said part of the end or top in its open position after being turned about said fold line.

For a better understanding of the invention, and to show how the same may be carried into effect, reference will now be made, by way of example, to the accompanying drawings, in which:—

Figure 1 is a full-size plan view illustrating a cardboard or manila paper blank from which a cigarette packet, intended to contain twenty cigarettes and having a closure arrangement in accordance with the invention, may be produced by folding and glueing,

Figure 2 is a perspective view illustrating a cigarette packet during its formation from the blank of Figure 1,

Figure 3*a* is a rear elevation of the upper half of the completed packet of Figure 2 showing the closure arrangement in a closed condition,

Figure 3*b* is a similar view to Figure 3*a* but shows the closure arrangement in an open condition, and

Figure 4 is a perspective view of the upper half of the packet of Figures 2, 3*a* and 3*b*, taken from a different viewpoint to that of Figure 2, showing details of the opening and closing of the closure arrangement of the invention.

Referring to the accompanying drawings, those drawings show the formation of a cardboard or manila paper cigarette packet that is intended to contain twenty cigarettes but, of course, the packet may be somewhat different in shape to that which is illustrated, may be constructed and arranged to contain numbers of cigarettes, cigars, cheroots or the like other than twenty and, indeed, may be so constructed that a packet provided with a closure arrangement in accordance with the invention can hold cylindrical objects such as ampoules and the like.

The blank that is shown in Figure 1 of the drawings has a body 1 that is formed from a thin grade of cardboard or from manila paper, said body 1 being conventionally printed on one side (the side which is remote from a viewer of Figure 1) to show identifying trade mark and other material and any pattern, logo and/or other indicia chosen by the manufacturer to promote and clearly identify the particular brand of cigarettes that are to be contained within the packet. As shown in Figure 1, the thicker lines are cut lines whereas the thinner lines are edges or fold lines.

The body 1 has a rectangular front wall 2 which is formed adjacent one corner with an arcuate and nearly semicircular cut line 3 to produce a first crescent-shaped portion 6. The crescent-shaped portion 6 is connected to one edge of an adjacent end or top 4/5 of the packet by a straight fold line which actually connects only approximately half of said portion 6 to a port 5 of the end of top 4/5, the continuation of said fold line which registers with the part 4 of said end or top 5 being, as can clearly be seen in Figure 1, in the form of a cut line so that there is no positive connection between the crescent-shaped portion 6 and the part 4.

The opposite edge of the part 5 of the end or top 4/5 of the packet is in the form of a fold line that is parallel to the first mentioned edge of said part 5 and this fold line connects said part 5 to a second crescent-shaped portion 6′ that is substantially symmetrically similar, but not identical, to the portion 6, being provided at the left-hand end (as seen in Figure 1 of the drawings) with a projection 7 that will be referred to again below. The blank also includes a projecting tab 8

that co-operates, in the finished packet, with the first crescent-shaped portion 6 in a manner which will also be described below.

Figure 2 of the drawings shows the packet in a partly completed condition prior to final glueing to produce the flat substantially cuboid/rectangular parallelepipedic configuration of the finished and closed packet. In practice, during production by machines, the twenty cigarettes which the packet is to contain will usually be introduced into the packet during the steps which lead to its final shape. In the finished packet, the first and second crescent-shaped portions 6 and 6′ are connected to the opposite parallel edges of the part 5 of the packet end or top 4/5 and those two edges are in the form of 90° fold lines so that, when the packet is standing upright, the two portions 6 and 6′ project substantially perpendicularly downwards from the end or top part 5 in the closed condition of the packet. The second crescent-shaped portion 6′ is prevented from turning outwardly about its fold line connection to the end or top part 5 by a corner portion of the rectangular rear wall of the packet which corner portion is not, as will be apparent from the lower part of Figure 1 of the drawings, cut away by any line to produce a crescent-shaped portion. The first crescent-shaped portion 6, on the other hand, is prevented from turning outwardly about its fold line connection to the end or top part 5 by the tab 8 which is folded round from one side of the packet into the position that is shown in broken lines in Figure 4 of the drawings to lie against an upper region of the rectangular front wall 2 where it is lightly glued in position to overlap, without adhesive, said first crescent-shaped portion 6. The external surface of the tab 8 may advantageously, but not essentially, be marked with simple packet-opening instructions such as, for example, "Open" accompanied by an arrow pointing upwardly towards the end or top part 5.

The part 4 of the end or top 4/5 of the packet is fixed in position and is connected to the part 5 thereof by a fold line *a*, this fold line *a* extending horizontally perpendicular to the front wall 2 and the rear wall of the packet body 1 when said packet is standing upright on a flat horizontal surface. Figure 3*a* shows the packet closed and it will be apparent that, to open it, it is only necessary to engage the free edge of the part 5, that is parallel to the fold line *a*, and urge it upwardly in the direction indicated by an arrow in Figure 4 of the drawings. Said part 5 then turns upwardly about the fold line *a* together with the first and second crescent-shaped portions 6 and 6′ which slide turnably around an axis coinciding with the fold line *a*, the outer surface of the portion 6 bearing against the inner surface of the tab 8 and the outer surface of the portion 6′ bearing against the inner surface of the rear wall of the body 1 so that said two portions remain in substantially parallel relationship with one another and with the front wall 2 and rear wall of the packet.

As will be seen by comparing Figures 3*a* and 3*b* and by comparing the full line and broken line positions that are shown in Figure 4, the turning movement of the specified parts about the fold line *a* can continue until the projection 7 encounters an upright side wall of the packet, this engagement preventing further turning about the fold line *a* and tending to retain the closure arrangement in its open position in which cigarettes can readily be extracted therefrom through the opening in the end or top 4/5 that coincides with the closed position of the part 5, said opening being flanked by the upwardly displaced first and second crescent-shaped portions 6 and 6′. The closure arrangement can readily be returned to its packet-closing position merely by pushing the part 5 back downwardly about the fold line *a* until the position shown in Figure 3*a* of the drawings is reached. The fact that the projection 7 tends to maintain the closure arrangement in its upright fully opened position is, in practice, advantageous both for obtaining access to the cigarettes within the packet and for defining a substantially fixed starting position from which complete closure of the packet can readily be effected. The frictional engagement of the first and second crescent-shaped portions 6 and 6′ against the inner surfaces of the tab 8 and the rear wall of the packet body 1 prevents the packet from accidentally opening in, for example, the pocket of an article of clothing, except under the most adverse circumstances, and the cigarettes within the packet are thus prevented from becoming soiled and contaminated by fluff, dirt and so on whilst, conversely, particles of loose tobacco can rarely, if ever, escape from the packet into a handbag, pocket or the like in which said packet may be carried by a smoker. Although, obviously, the thin cardboard or manila paper material of the packet body 1 will not resist indefinate folding without deterioration, said material has sufficient strength to resist failure of the fold line *a* for the number of folding operations which it is likely to have to undergo before the packet is eventually thrown away. In the case of the example which is illustrated that is in the form of a packet intended to contain twenty cigarettes, the fold line *a* will not normally have to last satisfactorily for more than a maximum of forty folding operations; twenty openings alternating with twenty closings assuming that only a single cigarette is extracted at each opening of the packet.

The blank that is shown in Figure 1 of the drawings is quickly and easily formed automatically by machinery from one of the stated materials and can readily be folded and glued into its final shape in an automatic manner during which, as stated above, the twenty cigarettes which it is to hold will usually be introduced. The packet is thus practical and inexpensive but its closure arrangement is more effective from the sanitary point of view than are conventional closure arrangements.

Claims

1. A closure arrangement for a packet that is of flat substantially cuboid configuration, wherein the rectangular front or rear wall of the packet body is formed adjacent one corner with an arcuate cut to produce a first crescent-shaped portion connected to one edge of an adjacent end or top of the packet, said end or top also being connected at its opposite edge to a second crescent-shaped portion and there being a fold line in said end or top about which part of that end or top can turn with said first and second crescent-shaped portions to open and close the packet, and wherein the second crescent-shaped portion is provided with a projection which is so positioned and arranged that it will tend to maintain said part of the end or top in its open position after being turned about said fold line.

2. A closure arrangement as claimed in claim 1, wherein, a completed packet, the second crescent-shaped portion bears frictionally against an inner surface of the front or rear of the packet whilst the first crescent-shaped portion bears frictionally against a tab which is provided in such a position as wholly or partly to cover a region adjacent said one corner of the rear or front of the packet body.

3. A closure arrangement as claimed in claim 2, wherein said tab is marked on its external visible surface with instructions as to how to open said packet.

4. A closure arrangement as claimed in any preceding claim, wherein said packet is formed from manila paper or cardboard.

5. A closure arrangement as claimed in any preceding claim, wherein the packet is constructed and arranged to contain twenty cigarettes.

6. A blank from which a packet having a closure arrangement as claimed in any preceding claim may be produced by folding and the use of an adhesive.

7. A blank for producing a packet having a closure arrangement as claimed in any one of claims 1 to 5, said blank being substantially as hereinbefore described with reference to Figure 1 of the drawings.

8. A cigarette packet having a closure arrangement which is substantially as hereinbefore described with reference to the accompanying drawings.

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