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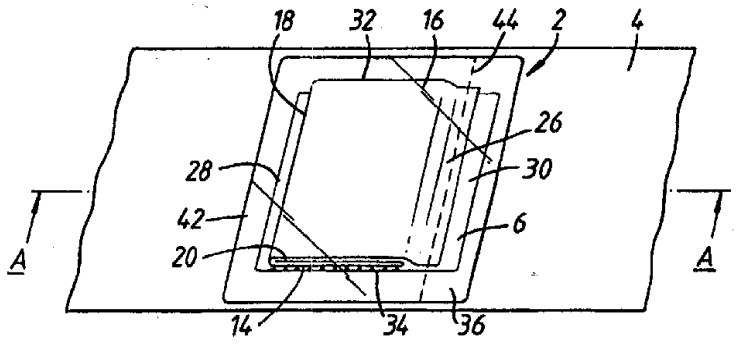

(57) Abstract

A self-adhesive label carried on a backing of release material comprising a self-adhesive support piece having a rearwardly-directed self-adhesive surface adhered to the backing of release material, a folded portion disposed on the front surface of the support piece, the folded portion including front and back covers thereof enclosing an intermediate part therebetween, and a self-adhesive laminar material covering and adhered over the folded portion, the laminar material extending past the edges of the support piece and the folded portion to form a peripheral border of the label having a rearwardly-directed surface coated with a permanent pressure-sensitive adhesive which is adhered to the backing of release material, and wherein the intermediate part can be accessed by cutting or tearing the laminar material. The invention also provides a method of producing such labels.

LABELS AND MANUFACTURE THEREOF

The present invention relates to self-adhesive labels and to a method of manufacturing self-adhesive labels. In particular, the present invention relates to such labels which are folded and conceal hidden information and which are openable by a user when adhered to a product so as to reveal the previously hidden information.

Manufacturers of consumer products sometimes wish to promote the products using so-called "instant win" promotions. In such promotions, a large number of the products are provided either directly or indirectly with hidden information which is revealed by a user who can then claim a prize if the product is identified as a winning product. A large number of products are identified as non-winning products and a small number of products are identified as winning products. It is necessary for the information indicating whether or not the product is a winning product or a non-winning product to be substantially inaccessible until after the user has purchased the product, and for evidence of tampering to be present as a result of a user accessing the information. For example, typical instant win promotions involve the insertion of winning tickets into sealed product packs, the printing of information on the inside of metal cans and the printing of so-called scratch off promotions onto the product packaging. All of these promotion techniques require a substantial modification to the packaging or labelling requirements of the product.

The present invention is applicable to an instant win promotional system in the form of a substantially secure and tamper-evident self-adhesive label which may be adhered to the product as a secondary label, the primary label conveying the standardised information concerning the product to the consumer.

Secondary labels in the form of leaflet labels have been known for many years for consumer purposes. Such labels can be provided with tear lines in the front cover, as disclosed in EP-A-0043179, or alternatively can be overlaminated, for example as

in EP-A-0180365. Such prior leaflet labels are not suitable for use as instant win promotion labels because they do not provide the required level of security in conjunction with tamper evidence.

The above discussion of documents, acts, materials, devices, articles and the like is included in the specification solely for the purpose of providing a context for the present invention. It is not suggested or represented that any or all of these matters formed part of the prior art base or were common general knowledge in the field relevant to the present invention as it existed in Australia before the priority date of each claim of this application.

The present application is applicable to self-adhesive label suitable for use as an instant win promotion label which provides the necessary level of security and tamper evidence.

Accordingly, the present invention provides a self-adhesive label carried on a backing of release material comprising a self-adhesive support piece having a rearwardly-directed self-adhesive surface adhered to the backing of release material, a folded portion disposed on the front surface of the support piece, the folded portion including front and back covers thereof enclosing an intermediate part therebetween, and a self-adhesive laminar material covering and adhered over the folded portion, the laminar material extending past the edges of the support piece and the folded portion to form a peripheral border of the label having a rearwardly-directed surface coated with a permanent pressure-sensitive adhesive which is adhered to the backing of release material, and wherein the intermediate part can be accessed by cutting or tearing the laminar material.

The present invention further provides a method of producing a succession of self-adhesive labels carried on a backing of release material, the method comprising the steps of: (a) providing a self-adhesive support web carried on a backing of release material; (b) adhering a succession of folded sheets along the length of the support web, each folded sheet comprising a front cover portion, a back cover portion, and an intermediate portion enclosed therebetween; (c) die-cutting the assembly of folded sheets and support web as far as the release material thereby to cut a succession of intermediate labels, each comprising a folded leaflet cut from one of the folded sheets and adhered to a support piece cut from the support web; (d) removing waste material surrounding the intermediate labels from the backing of release material; (e) overlaminating the intermediate labels with a web of a self-adhesive laminar material coated with a permanent pressure-sensitive adhesive so that each intermediate label is encapsulated by the laminar material; and (f) die-cutting through the laminar material around each intermediate label thereby to form a peripheral border of the laminar material surrounding each intermediate label and adhered to the backing of release material.

It is to be understood that, throughout the description and claims of the specification the word "comprise" and variations of the word, such as "comprising" and "comprises", is not intended to exclude other additives, components, integers or steps.

An embodiment of the present invention will now be described by way of example only, with reference to the accompanying drawings, in which:-

Figure 1 is a perspective view of a self-adhesive label in accordance with an embodiment of the present invention carried on a backing of release material;

Figure 2 is an elevational section along line A-A of the self-adhesive label shown in Figure 1;

Figure 3 is a schematic side view of an apparatus for use in a first stage of a method of manufacturing a succession of the self-adhesive labels of Figures 1 and 2; and

Figure 4 is a schematic side view of a further apparatus for use in performing a second stage of the method.

Referring to Figures 1 and 2, there is shown a self-adhesive label 2 in accordance with an embodiment of the present invention when carried on a web of a backing 4 of release material, for example silicone-coated paper. Generally, a succession of such labels 2 is carried on the backing 4 of release material and is wound up into a reel for automatic application of the self-adhesive labels 2 to products to be labelled by an automatic labelling machine.

The self-adhesive label 2 comprises a lowermost self-adhesive support piece 6 comprising a sheet 8, typically of transparent plastics such as polyvinyl chloride, polyester, polyethylene or polypropylene, coated on its rearmost face with a layer 10 of pressure-sensitive adhesive which releasably adheres the support piece 6 to the front surface of the backing 4 of release material. In the label 2, a folded leaflet 12 comprises a back cover 14, a front cover 16 folded over the back

cover 14 about a first fold line 18 and an intermediate panel 20 lying between the front and back covers 16,14 and connected to the back cover 14 by a second fold line 22. The rearmost surface of the back cover 14 is adhered to a major portion of the front surface of the support piece 6 by a layer 24 of permanent adhesive, typically a water-based adhesive such as PVA adhesive. The front cover 16 includes an extended flap 26 which extends past the second fold line 22 and is disposed adjacent the front surface of the support piece 6.

The front cover 16 of the self-adhesive label 2 conceals any information printed on the surfaces of the intermediate panel 20. When the self-adhesive label 2 is being used in an instant win promotion, such hidden printed information may include an indication of whether the label is a winning or non-winning label.

The support piece 6 and the folded leaflet 12 are dimensioned whereby in a longitudinal direction both of the web of the backing 4 of release material and of the folded leaflet 12, *i.e.* in a direction extended between the first fold line 18 and the extended flap 26, the support piece 6 extends longitudinally past the first fold line 18 and the extended flap 26 so as to form two opposed edge portions 28,30 which are not covered by the folded leaflet 12. The second portion 30 has a larger length in the longitudinal direction than the first portion 28 and is located on the side of the folded leaflet 12 which is opened by a user. As is described hereinbelow with reference to the method of manufacturing the self-adhesive label 2, the opposed transverse edges 32,34 of the folded leaflet/support piece assembly comprise coincident edges of the folded leaflet 12 and the support piece 6 which have been formed by die-cutting.

The folded strip/support piece assembly is overlaminated and entirely encapsulated by a self-adhesive laminar material 36 which preferably comprises a transparent plastics sheet, typically of polyvinyl chloride, polyester, polyethylene or polypropylene, coated on its rear surface with a layer 40 of

pressure-sensitive adhesive. The pressure sensitive adhesive is permanent adhesive as is known in the art. The particular permanent adhesive formulation is selected so as to form a strong reliable adhesive bond with the surface of the particular product to be labelled. The laminar material 36 extends longitudinally past the edge portions 28,30 of the support piece 6 and transversely past the transverse edges 32,34 to form a border 42 surrounding the folded leaflet/support piece assembly, the border 42 being adhered all around its periphery to the backing 4 of release material by the layer 40 of pressure-sensitive adhesive. In Figure 1, the laminar material 34 is transparent whereby the folded leaflet/support piece assembly is visible thereunder.

The laminar material 36 is adhered by the layer 40 of pressure-sensitive adhesive to the front surface of the front cover 16 and to the front surfaces of the two opposed edge portions 28,30 of the support piece 6.

The self-adhesive label 2 is provided with an opening line 44 extending transversely across the label 2 and in particular across the extended flap 26. The opening line 44 may comprise a printed line indicating where the label 2 should be cut open, such a configuration being used when the label is intended to be adhered to a cuttable substrate of the product, *e.g.* a plastics wrapping film. Alternatively the opening line 44 may comprises a perforated tear line, extending through the laminar material 36 and the extended flap 26, when the label is intended to be adhered to a thick or solid substrate *e.g.* a box or container.

In use, the self-adhesive label is applied to a product to be labelled and is permanently adhered thereto by the self-adhesive border 42 and by the self-adhesive support piece 6. This ensures a strong adhesive bond between the label 2 and the product so that the self-adhesive label 2 does not become inadvertently opened. Since the laminar material 34 entirely encapsulates the folded leaflet 12, there is no danger of the folded leaflet 12 inadvertently becoming accessible to a user. In particular, since the border 42 extends outwardly along the die-cut transverse edges 32,34 of the folded leaflet/support

piece assembly, it is not possible for a person wishing to access the interior printed surfaces of the folded leaflet 12 to look into the body of the leaflet through those transverse edges without positively opening the label.

The pressure-sensitive adhesive of the laminar material 34 is selected so that it has a permanent adhesive bond with the surface of the particular product to be labelled whereby the self-adhesive label 2 cannot readily be peeled off from the product or opened without cutting or tearing along the opening line 44. This reduces the incidence of persons attempting to open the label without purchasing the product in order to determine whether or not the product is a winning or non-winning product. Thus the label 2 can provide a tamper-evident feature by being openable only by a cutting or tearing mechanism.

After the laminar material 36 and extended flap 26 have been cut or torn, a person can then manually access the intermediate panel 20 and pull the intermediate panel outwardly form the pocket defined by the front and back covers 16,14. In this way, the user can reveal perviously hidden information printed on the intermediate panel 20, such as whether the product is a winning product in an instant win promotion.

A method of producing self-adhesive labels in accordance with the embodiment of Figures 1 and 2 is illustrated in Figures 3 and 4.

Referring to Figure 3, there is shown an apparatus, designated generally as 50, for performing a first stage of the method in which a succession of folded leaflets is adhered to a support web carried on a backing of release material, and then the leaflets and underlying support web carried on the backing of release material are die-cut to form a succession of intermediate labels which are then overlaminated by a web of self-adhesive laminar material. Figure 4 shows an apparatus for performing a second stage of the method in which the overlaminated assembly of die-cut folded leaflet/support piece assemblies are subjected to a second die-cutting step in which

the self-adhesive labels of the first embodiment are formed and wound up onto a reel of release backing material.

Referring particularly to Figure 3, there is provided a reel 52 of a duplex pressure-sensitive material comprising a pressure-sensitive transparent plastics web 54 carried on a backing web 56 of release material. The duplex web is unwound from the reel 52 and fed past an adhesive applying station 58 at which an adhesive applicator 60 applies a succession of patches 62 of liquid adhesive, for example a water-soluble adhesive, along the length of the upper surface of the plastics web 54. The duplex web is then conveyed to a folded sheet applying station 64 at which a succession of folded sheets 66 are applied by a leaflet applicator, represented generally by the ramp 68, to the succession of patches 62 of adhesive. It will be seen that the folded sheets 66 are applied in registry with the patches 62 of adhesive whereby the back cover 67 of each folded sheet 66 is adhered to the plastics web 54 by a respective patch 62 of adhesive.

The folded sheets 66 adhered to the plastics web 54 are then conveyed to a die-cutting station 68. The die-cutting station 68 is provided with an upper die-cutting roller 70 and a lower backing roller 72 through which is passed the duplex web carrying the folded sheets 66. The die-cutting roller 70 cuts through the adhered folded sheets 66 and through the plastics web 54 as far as, but not through, the backing 56 of release material, so as to cut the support piece 6 and the folded leaflet 16 adhered thereto of the embodiment of Figures 1 and 2. This forms a succession of intermediate labels 78. The waste material surrounding the intermediate labels 78 consisting of the cut-away skeleton of the plastics web of laminar material 54 carrying the cut-away portions of the folded sheets 66 adhered thereto forms a waste web 74 which is removed from the backing 56 of release material and wound into a reel 76.

The die-cut intermediate labels 78 then pass to a laminating station 80 at which a web of self-adhesive, transparent plastics laminar material 82 is wound out from a reel 84 thereof and

laminated by a roller 86 over the succession of intermediate labels 78 on the backing 56 of release material. Each intermediate label 78 is entirely encapsulated by the laminar material 82 which extends past both the longitudinal and transverse cut edges of the intermediate labels 78. The resultant succession of overlaminated intermediate labels 78 is then wound into a reel 88.

The second stage of the method is illustrated in Figure 4 in which the assembly of overlaminated intermediate labels 78 is fed out from the reel 88 thereof and conveyed to a second die-cutting station 90 comprising an upper die-cutting roller 92 and a lower backing roller 94. The die-cutting roller 92 cuts through only the overlaminate web 82 so as to cut the outer periphery of the laminar material 36 of the embodiment of Figures 1 and 2. The resultant waste web skeleton 96 is wound into a reel 98. This die-cutting step forms the resultant self-adhesive labels 2 of the embodiment illustrated in Figures 1 and 2. When the opening line 44 is a perforated tear line, this can be cut by the die-cutting roller 92. The backing 56 of release material carrying the self-adhesive labels 2 is wound into a reel 100.

In the method of the invention, each folded sheet 66 may be cut to form a plurality of folded leaflets 16 spaced transversely across the web and the die-cutting may be performed so that a plurality of self-adhesive labels 2 are provided across the width of the backing 56 of release material with the backing 56 being slit to form a plurality of reels 100.

It will be apparent to those skilled in the art that in the drawings the thicknesses of some of the layers of the label have been greatly exaggerated for the purpose of clarity of illustration.

In the illustrated embodiment, the self-adhesive label comprises a folded leaflet having three panels. In alternative embodiments of the present invention, a larger number of panels may be provided.

The self-adhesive label of the present invention comprises an elegant, simple and easy to manufacture leaflet label having sufficient security to constitute an instant win promotional label. The provision of an overlaminated label not only affords a level of security to the label preventing inadvertent opening of the label and dissuading people from unauthorised opening of the label, but also the laminar material provides a high degree of physical protection to the underlying folded paper leaflet. The present invention avoids the need for significant changes to the product packaging or to the product packaging line. The present invention also avoids the need for scratch off labels which require special printing apparatus and ink and are not really suitable for application to a product to be labelled because the scratch off regions could inadvertently be scuffed and scratched during product handling.

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A self-adhesive label carried on a backing of release material comprising a self-adhesive support piece having a rearwardly-directed self-adhesive surface adhered to the backing of release material, a folded portion disposed on the front surface of the support piece, the folded portion including front and back covers thereof enclosing an intermediate part therebetween, and a self-adhesive laminar material covering and adhered over the folded portion, the laminar material extending past the edges of the support piece and the folded portion to form a peripheral border of the label having a rearwardly-directed surface coated with a permanent pressure-sensitive adhesive which is adhered to the backing of release material, and wherein the intermediate part can be accessed by cutting or tearing the laminar material.

2. A self-adhesive label according to claim 1 wherein the front cover and the intermediate part are respectively connected by first and second fold lines to the back cover.

3. A self-adhesive label according to claim 1 or claim 2 wherein the front cover is larger than the back cover and the intermediate part and includes an extended flap which is cut or torn together with the laminar material to access the intermediate part.

4. A self-adhesive label according to any foregoing claim further comprising an opening line extending across the label.

5. A self-adhesive label according to any foregoing claim wherein the intermediate part is printed with information directed to an instant win promotion.

6. A method of producing a succession of self-adhesive labels carried on a backing of release material, the method comprising the steps of:

(a) providing a self-adhesive support web carried on a backing of release material;

(b) adhering a succession of folded sheets along the length of the support web, each folded sheet comprising a front cover portion, a back cover portion, and an intermediate portion enclosed therebetween;

(c) die-cutting the assembly of folded sheets and support web as far as the release material thereby to cut a succession of intermediate labels, each comprising a folded leaflet cut from one of the folded sheets and adhered to a support piece cut from the support web;

(d) removing waste material surrounding the intermediate labels from the backing of release material;

(e) overlaminating the intermediate labels with a web of a self-adhesive laminar material coated with a permanent pressure-sensitive adhesive so that each intermediate label is encapsulated by the laminar material; and

(f) die-cutting through the laminar material around each intermediate label thereby to form a peripheral border of the laminar material surrounding each intermediate label and adhered to the backing of release material.

7. A method according to claim 6 wherein the folded leaflet comprises a back cover, a front cover connected to the back cover by a first fold line, and an intermediate part connected to the back cover by a second fold line.

8. A method according to claim 7 wherein the front cover is larger than the back cover and the intermediate part and includes an extended flap.

9. A method according to any one of claims 6 to 8 further comprising the step of cutting at least through the laminar material to form in each self-adhesive label an opening line extending across the respective label.

10. A method according to any one of claims 6 to 9 further comprising the step of printing the intermediate portion of each folded sheet with information directed to an instant win promotion.

11. A self-adhesive label substantially as hereinbefore described with reference to any one of Figures 1 to 4.

12. A method of producing a succession of self-adhesive labels carried on a backing of release material substantially as hereinbefore described with reference to Figures 1 to 4.

DATED: 4 February, 2000

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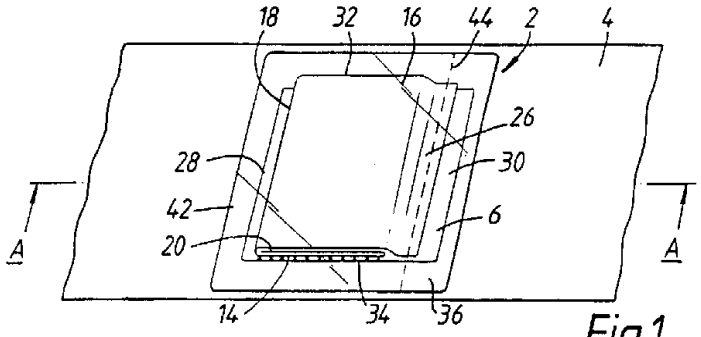

Fig.1

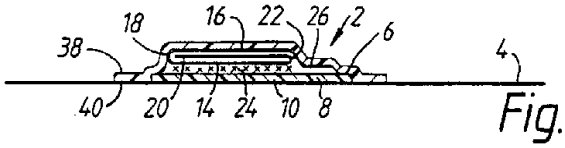

Fig.2

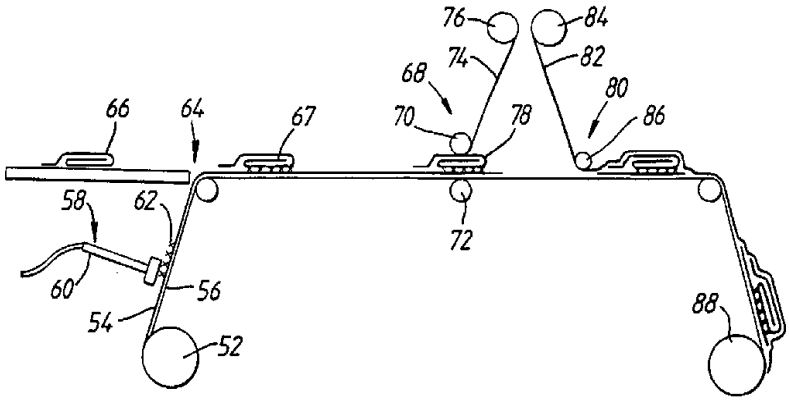

Fig.3

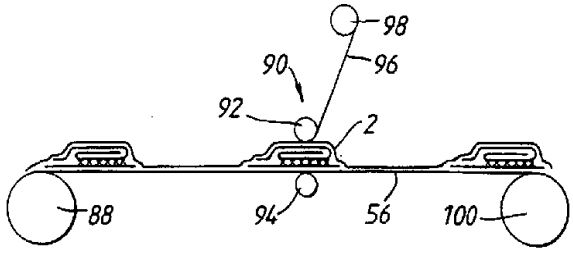

Fig.4