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(54) LABELS AND MANUFACTURE THEREOF

ETIKETTEN UND DEREN HERSTELLUNG

ETIQUETTES ET LEUR FABRICATION

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Description

The present invention relates to a self-adhesive label and to a method of producing a succession of self-adhesive labels carried on a backing of release material.

It is known to provide resealable multilaminar labels which, after they have been adhered to a product, can be opened to reveal previously hidden surfaces.

The present invention aims to provide an improved such label and an improved method of manufacturing such labels.

EP-A-0346567 discloses a self-adhesive label. EP-A-0087987, EP-A-0130053 and EP-A-0301814 are each in the name of the applicant and disclose self-adhesive labels in which folded sheets are adhered to support pieces.

The present invention provides a self-adhesive label comprising a multilaminar folded label which comprises first and second portions which are respectively adhered to a backing of release material by a first region of permanent adhesive and a second region of adhesive, characterised by the second region being of resealable adhesive and further comprising a laminar material which covers the folded label and has a first edge region thereof which extends past a folded edge of the first and second portions, the first edge region being adhered to the backing of release material by the first regions of adhesive.

The present invention further provides a method of producing a succession of self adhesive labels carried on a web comprising a backing of release material, the method comprising the steps of: (a) applying to a backing of release material a succession of first and second regions of respectively permanent and resealable adhesive; (b) disposing a succession of multilaminar folded labels on the adhesive regions whereby each multilaminar folded label is adhered to the backing of release material by a pair of the first and second regions of adhesive and parts of the first regions are left exposed; (c) applying a laminar material over the succession of multilaminar folded labels whereby the laminar material is adhered to the exposed parts of the first regions; and (d) cutting through the laminar material and through the applied multilaminar labels to form the self-adhesive labels, the cutting being performed whereby each self-adhesive label includes a portion of the laminar material which is adhered at a first edge region thereof to the first region of adhesive.

Embodiments 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 plan view of a length of a backing of release material carrying adhesive regions and self-adhesive labels not in accordance with the invention;

Figure 2 is an elevational view of the self-adhesive label shown in Figure 1;

Figure 3 is a schematic perspective view of an apparatus for use in a method of producing labels in accordance with an embodiment of the present invention; and

Figure 4 is an elevational view of the self-adhesive label made by the method shown in Figure 3.

Referring to Figure 1, there is shown a length of backing 2 of release material which has had applied thereto a succession of second regions 6 of resealable adhesive. Typically, the permanent and resealable adhesives are hot melt adhesives. Each second region 6 of resealable adhesive is disposed longitudinally substantially adjacent a respective first region 4 of permanent adhesive whereby the first and second regions 4,6 are oriented in pairs of those regions 4,6. The regions 4,6 of adhesive are printed or otherwise applied directly to the backing 2 of release material and the regions 4,6 are applied either simultaneously or successively in any order. In the manufacture of the self-adhesive labels, the backing 2 of release material carrying the successions of pairs of regions, 4,6 is passed to a label applying station (not shown) at which multilaminar folded labels 8 are successively applied to the adhesive regions 4,6 whereby each applied label 8 covers a respective pair of regions 4,6. The labels 8 are dimensioned so as entirely to cover the respective pair of adhesive regions 4,6 so that no free adhesive is exposed. The backing 2 of release material carrying the adhered labels 8 forming the resultant self-adhesive labels 10 thereon is then wound into a reel.

A self-adhesive label 10 is shown in greater detail in Figure 2. It will be seen that the multilaminar folded label 8 comprises a first portion 12 which is adhered to the first region 4 of adhesive and a second portion 14 which is adhered to the second region 6 of adhesive. The first portion 12 comprises a rear panel of the multilaminar folded label 8 and the second portion 14 comprises an overlapping flap of a front panel 16 of the folded label. In the illustrated label additional panels 18 are disposed between the rear 12 and front 16 panels.

In use, the self-adhesive label 10 is removed from the backing 2 of release material and then the self-adhesive label 10 is adhered to a product to be labelled by the first and second regions 4,6 of adhesive. When it is desired to open the multilaminar folded label 8, a user pulls the overlapping flap 14 away from the product thereby to release the flap 14 from the product at the interface with the resealable adhesive region 6. The main body of the self-adhesive label 10 remains permanently adhered to the product by means of the first region 4 of permanent adhesive. After the additional panels 18 have been read by a user, the overlapping flap 14 can be re-adhered to the product by means of the second region 6 of resealable adhesive.

An embodiment of the present invention is shown in Figures 3 and 4. Referring to Figure 3, in the manufacture of the self-adhesive labels 20 of the embodi-

ment, a succession of multilaminar folded labels 22 is applied to a succession of pairs of first regions 24 of permanent adhesive and second regions 26 of resealable adhesive in the manner described hereinabove with reference to Figures 1 and 2. In this embodiment however, the applied multilaminar folded labels 22 are smaller in dimensional area than the regions defined by the first and second regions 24,26 of adhesive whereby respective parts 28,30 of the first and second regions 24,26 are left exposed and those parts 28,30 surround the applied multilaminar folded label 22. As in Figures 1 and 2, a first portion 32, comprising a rear panel, of the rolded label 22 is adhered to the first region 24 and a second portion 34, comprising an overlapping flap of a front panel 36 of the folded label 22, is adhered to the second region 26 of adhesive. Each region 24,26 of adhesive extends beyond the longitudinally directed edges of the applied label 22. The regions 24,26 of adhesive adhere the label 22 to a backing 38 of release material.

The label 22 adhered to the backing 38 of release material is passed to a laminar material applying station 40 at which a laminar material 42, which comprises a transparent plastics web e.g. of polyester, is urged by a roller 44 over the succession of applied labels 22 and of regions 24,26 of adhesive. The rearwardly-directed surface of the laminar material 42 is adhered to the exposed parts 46,48 of the first and second portions 24,26. The combined assembly then passes to a die-cutting station 50 at which the assembly is passed between an upper die-cutting roller 52 and a lower backing roller 54. The die-cutting roller 52 is adapted to cut out from the laminar material 42 and the multilaminar folded label 22, a self-adhesive label 20 which remains on the backing 38 of release material. The waste web remnant 56 is removed. In the die-cutting step two transversely oriented cuts are made through the laminar material 42, one cut being upstream and the other cut being downstream of the respective multilaminar folded label 22. In the die-cutting step additionally two longitudinal cuts are made through the laminar material 42 and through the applied multilaminar folded label 22. The waste web remnant 56 comprises the excess laminar material 42 and in addition the cut-away longitudinal edges of the multilaminar folded label 22 and the extraneous adhesive from the regions 24,26.

The resultant self-adhesive label is shown in Figure 4 from which it will be seen that the folded label portion 58 which has been cut from the original multilaminar folded label 22 is adhered by respective areas 60,62 of the original first and second regions 24,26 of adhesive to the backing 38 of release material. A laminar material portion 64 covers the folded label portion 58 and has first and second opposed edge regions 66,68 thereof which extend past respective edges 70,72 of the label portion 58. The first and second edge regions 66,68 are respectively adhered to the backing 38 of release material by the first and second areas 60,62 of the adhesive regions 24,26. Thus the laminar material portion 64 is retained in a closed configuration by the adhesion of the opposed edge regions 66,68 to the backing 38 of release material. The laminar material portion 64 covers the entire self-adhesive label 20 and protects the label 20 from damage or soiling. An overlapping flap 74 of the front cover panel is adhered to the area 62 of resealable adhesive. The label of Figure 4 may be modified by shortening the front cover panel thereby removing the overlapping flap whereby the folded label portion is itself only adhered to the adhesive area 60 and it is only the laminar material portion 64 which is adhered to the area 62 of resealable adhesive.

In use, when it is desired to label a product the self-adhesive label 20 is stripped off from the backing 38 of release material e.g. by an automatic labelling machine and the label 20 is adhered to the product by the areas 60,62 of adhesive. When it is desired to open the label 20 so as to access the hidden inner surfaces, the edge region 68 of the laminar material portion 64 and the overlapping flap 74 are pulled away from the product at the interface with the areas 62 of resealable adhesive. After the label has been read by a user, the overlapping flap 74 and the edge portion 68 of the laminar material portion 64 can be readhered to the product by the area 62 of resealable adhesive.

Claims

1. A self-adhesive label (20) comprising a multilaminar folded label (58) which comprises first and second portions (32, 34) which are respectively adhered to a backing of release material (38) by a first region (24) of permanent adhesive and a second region (26) of adhesive, characterised by the second region being of resealable adhesive and further comprising a laminar material (64) which covers the folded label (58) and has a first edge region (66) thereof which extends past a folded edge (70) of the first and second portions, the first edge region (66) being adhered to the backing of release material (38) by the first regions (60) of adhesive.

2. A self-adhesive label according to claim 1 wherein the first portion (32) comprises a rear panel of the folded label (58) and the second portion (34) comprises an overlapping flap (74) of a front panel of the folded label (58).

3. A self-adhesive label according to claim 1 or claim 2 further comprising a second edge region (68) of the laminar material (64) which extends past a second opposed edge (72) of the first and second portions, and is adhered to the backing of release material (38) by the second region of adhesive (62).

4. A self-adhesive label according to any foregoing claim wherein the first region (60) comprises a strip

of permanent adhesive which is adhered adjacent to a folded edge (70) of the folded label (58) and the second region (62) is also adhered to a free edge of the rear panel which is remote from the folded edge (70).

5. A method of producing a succession of self adhesive labels (20) carried on a web comprising a backing of release material (38), the method comprising the steps of:

(a) applying to a backing of release material (38) a succession of first and second regions (24, 26) of respectively permanent and resealable adhesive;
(b) disposing a succession of multilaminar folded labels (58) on the adhesive regions (24, 26) whereby each multilaminar folded label (58) is adhered to the backing of release material (38) by a pair of the first and second regions (24, 26) of adhesive and part (28) of the first regions (24,26) are left exposed;
(c) applying a laminar material (42) over the succession of multilaminar folded labels (22) whereby the laminar material (42) is adhered to the exposed parts (28) of the first regions (24); and
(d) cutting through the laminar material (42) and through the applied multilaminar labels (22) to form the self-adhesive labels (20), the cutting being performed whereby each self-adhesive label (20) includes a portion (64) of the laminar material which is adhered at a first edge region (66) thereof to the first region (60) of adhesive.

6. A method according to claim 5 further comprising in step (d) cutting the backing of release material (134) whereby each multilaminar label (136) is cut into a plurality of cut labels (154,156) and the backing of release material (134) is cut into a corresponding plurality of cut webs (158,160) so that each cut web (158,160) of release material carries a succession of the cut labels (154,156).

7. A method according to claim 5 or claim 6 wherein the first and second regions (24,26) are oriented in pairs of those regions (24,26) and are substantially adjacent each other.

8. A method according to any one of claims 5 to 7 wherein the cutting is preformed such that in each self-adhesive label (10) the portion (64) of laminar material is adhered at an opposed second edge region (68) to the second region (62) of adhesive.

Patentansprüche

1. Selbstklebendes Etikett (20) mit einem mehrlagig gefalteten Etikett (58), welches erste und zweite Abschnitte (32, 34) enthält, die entsprechend an einer Unterlage aus Freigabematerial (34) an einem ersten Bereich (24) aus permanentem Klebstoff und an einem zweiten Bereich (26) aus Klebstoff angeklebt sind, dadurch gekennzeichnet, dass der zweite Bereich (26) aus einem wiederverklebbaren Klebstoff besteht und dass des Weiteren ein Laminatmaterial (64) vorhanden ist, das das gefaltete Etikett (58) abdeckt und einen ersten Randbereich (66) aufweist, der sich bis hinter einem gefalteten Rand (70) der ersten und zweiten Abschnitte hinauserstreckt, wobei der erste Randbereich (66) an die Unterlage aus Freigabematerial (38) über die ersten Bereiche (60) aus Klebstoff angeklebt ist.

2. Selbstklebendes Etikett nach Anspruch 1, worin der erste Abschnitt (32) einen rückwertigen Streifen des gefalteten Etiketts (58) aufweist und der zweite Abschnitt (34) einen überlappenden Streifenabschnitt (74) eines vorderen Streifens des gefalteten Etiketts (58) enthält.

3. Selbstklebendes Etikett nach Anspruch 1 oder nach Anspruch 2, des Weiteren aufweisend einen zweiten Randbereich (68) aus Laminatmaterial (64), der sich hinter einem zweiten entgegengesetzten Rand (72) der ersten und zweiten Abschnitte hinaus erstreckt und der an der Unterlage aus Freigabematerial (38) über den zweiten Klebstoffbereich (62) angeklebt ist.

4. Selbstklebendes Etikett nach einem der vorstehenden Ansprüche, worin der erste Bereich (60) einen Streifen aus Permanentklebstoff aufweist, der an einem gefalteten Rand (70) des gefalteten Etiketts (58) angrenzend angeklebt ist, wobei der zweite Bereich (62) an einem freien Rand des rückwärtigen Streifens ebenfalls angeklebt ist, welcher von dem gefalteten Rand (70) entfernt angeordnet ist.

5. Verfahren zur Herstellung einer Aufeinanderfolge von selbstklebenden Etiketten (20), die von einer Bahn getragen werden, welche eine Unterlage aus Freigabematerial (38) enthält, wobei das Verfahren folgende Schritte aufweist:

a) Auftragen einer Folge von ersten und zweiten Bereichen (24, 26) aus permanentem bzw. wiederverklebbarem Klebstoff auf einer Unterlage aus Freigabematerials (38) :

b) Anordnen einer Folge von mehrlagig gefalteten Etiketten (58) auf die Klebstoffbereiche (24, 26), wodurch jedes mehrlagig gefaltete Eti-

kett (58) über ein Paar von ersten und zweiten Bereichen (24, 26) aus Klebstoff auf die Unterlage aus Freigabematerial (38) aufgeklebt wird, wobei ein Teil (28) der ersten Bereiche (24, 26) freibleibt;

c) Auftragen eines Laminatmaterials (42) auf die Aufeinanderfolge von mehrlagig gefalteten Etiketten (22), wodurch das Laminatmaterial (42) an die freigebliebenen Teile (28) der ersten Bereiche (24) angeklebt wird; und

d) Durchtrennen des Laminatmaterials (42) und der aufgetragenen mehrlagigen Etiketten (22), um selbstklebende Etiketten (20) auszubilden, wobei der Trennvorgang derart durchgeführt wird, dass jedes selbstklebende Etikett (20) einen Abschnitt (64) des Laminatmaterials enthält, der an einem ersten Randbereich (66) des ersten Klebebereiches (60) angeklebt ist.

6. Verfahren nach Anspruch 5, worin der Schritt d) des Weiteren das Durchtrennen der Unterlage aus Freigabematerial (134) enthält, wodurch jedes mehrlagige Etikett (136) in eine Vielzahl von geschnittenen Etiketten (154, 156) und die Unterlage aus Freigabematerial (134) in eine entsprechende Vielzahl von geschnittenen Bahnen (158, 160) derart aufgetrennt werden, dass jede geschnittene Bahn (158, 160) des Freigabematerials eine Folge von geschnittenen Etiketten (154, 156) trägt.

7. Verfahren nach Anspruch 5 oder Anspruch 6, worin die ersten und zweiten Bereiche (24, 26) in Paaren von diesen Bereichen (24, 26) und im Wesentlichen aneinander angrenzend ausgerichtet sind.

8. Verfahren nach einem der Ansprüche 5 bis 7, worin der Schneidvorgang derart durchgeführt wird, dass bei jedem selbstklebenden Etikett (10) der Abschnitt (64) des Laminatmaterials bei einem entgegengesetzten zweiten Randbereich (68) an dem zweiten Bereich (62) des Klebstoffs angeklebt ist.

Revendications

1. Etiquette autocollante (20) incluant une étiquette repliée en couches multiples (58) qui comprend des première et deuxième parties (32, 34) qui sont collées respectivement à un substrat de matière de détachement (38) par une première région (24) d'adhésif permanent et une deuxième région (26) d'adhésif, caractérisée en ce que la deuxième région est en adhésif de détachement et en ce que l'étiquette comprend par ailleurs une matière en couche unique (64) qui recouvre l'étiquette repliée (58) et comporte une première région de bord (66) qui se prolonge au-delà d'un bord plié (70) des première et deuxième parties, la première région de bord (66) étant collée au substrat de matière de détachement (38) par les premières régions (60) d'adhésif.

2. Etiquette autocollante selon la revendication 1, dans laquelle la première partie (32) inclut un panneau arrière de l'étiquette repliée (58) et la deuxième partie (34) comprend un rabat en chevauchement (74) faisant partie d'un panneau antérieur de l'étiquette repliée (58).

3. Etiquette autocollante selon la revendication 1 ou la revendication 2, comprenant par ailleurs une deuxième région de bord (68) de la matière en couche unique (64) qui se prolonge au-delà d'un deuxième bord opposé (72) des première et deuxième parties et qui est collée au substrat de matière de détachement (38) par la deuxième région d'adhésif (62).

4. Etiquette autocollante selon l'une quelconque des revendications précédentes, dans laquelle la première région (60) consiste en un ruban d'adhésif permanent qui est collé au voisinage d'un bord plié (70) de l'étiquette repliée (58) et la deuxième région (62) est aussi collée à un bord libre du panneau arrière qui est distant du bord plié (70).

5. Procédé de production d'une succession d'étiquettes autocollantes (20) portées par une bande consistant en un substrat de matière de détachement (38), le procédé comprenant les étapes de :

(a) dépôt sur un substrat de matière de détachement (38) d'une succession de premières et deuxièmes régions (24, 26) d'adhésif respectivement permanent et de détachement ;
(b) disposition d'une succession d'étiquettes repliées en couches multiples (58) sur les régions d'adhésif (24, 26) de manière que chaque étiquette repliée en couches multiples (58) soit collée au substrat de matière de détachement (38) par un groupe de deux première et deuxième régions (24, 26) d'adhésif et une partie (28) des premières régions (24, 26) soit laissée à découvert ;
(c) dépôt d'une matière en couche unique (42) sur la succession d'étiquettes repliées en couches multiples (22) de manière que la matière en couche unique (42) soit collée aux parties à découvert (28) des premières régions (24) ; et
(d) coupe à travers la matière en couche unique (42) et à travers les étiquettes déposées en couches multiples (22) pour former les étiquettes autocollantes (20), la coupe étant effectuée de manière que chaque étiquette autocollante (20) comprenne une partie (64) de la matière

en couche unique qui est collée par sa première région de bord (66) à la première région (60) d'adhésif.

6. Procédé selon la revendication 5, comprenant par ailleurs à une étape (d) la coupe du substrat de matière de détachement (134) de manière que chaque étiquette en couches multiples (136) soit coupée en plusieurs étiquettes coupées (154, 156) et le substrat de matière de détachement (134) est coupé en un multiple correspondant de bandes coupées (158, 160) de manière que chaque bande coupée (158, 160) de matière de détachement supporte une succession d'étiquettes coupées (154, 156).

7. Procédé selon la revendication 5 ou la revendication 6, suivant lequel les première et deuxième régions (24, 26) sont orientées en groupes de deux de ces régions (24, 26) et sont sensiblement voisines l'une de l'autre.

8. Procédé selon l'une quelconque des revendications 5 à 7, suivant lequel la coupe est effectuée de manière que dans chaque étiquette autocollante (10), la partie (64) de matière en couche unique soit collée par une deuxième région de bord opposé (68) à la deuxième région (62) d'adhésif.

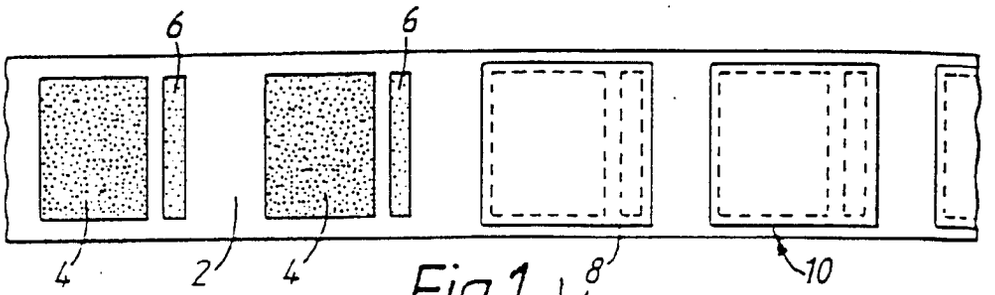


Fig.1.

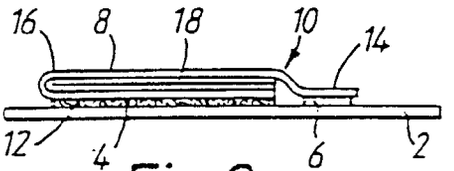


Fig.2.

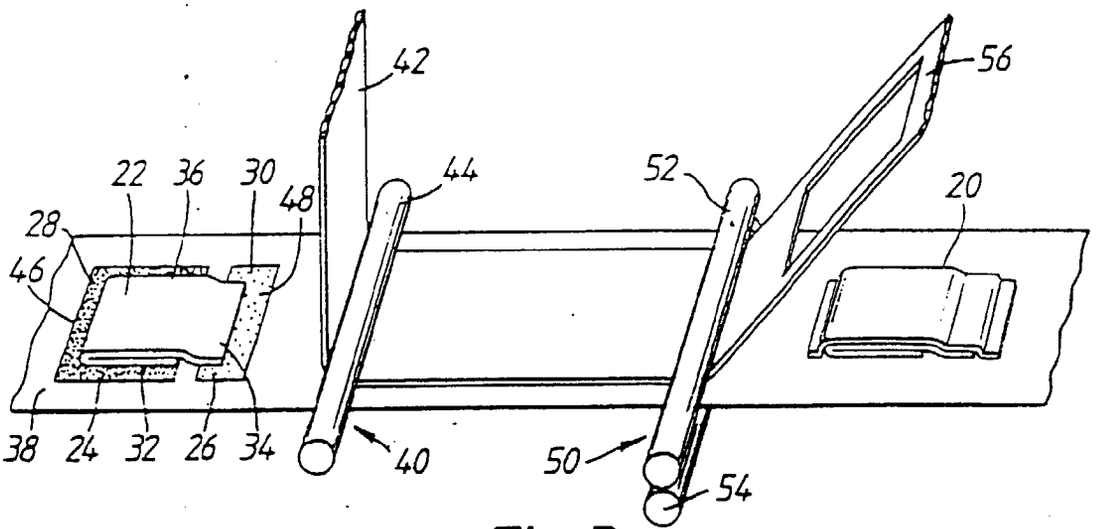


Fig.3.

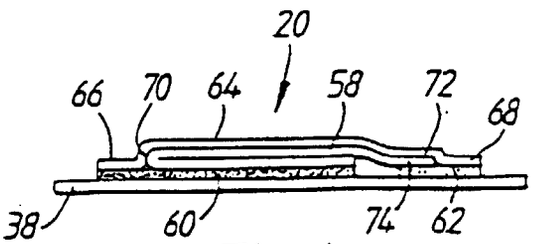


Fig.4.