

(19)



Europäisches Patentamt

European Patent Office

Office européen des brevets



(11)

EP 0 840 271 B1

(12)

EUROPEAN PATENT SPECIFICATION

(45) Date of publication and mention
of the grant of the patent:

15.01.2003 Bulletin 2003/03

(51) Int Cl.7: **G09F 3/10**

(21) Application number: **97308681.2**

(22) Date of filing: **30.10.1997**

(54) **Labelling process**

Etikettierverfahren

Procédé d'étiquetage

(84) Designated Contracting States:
BE DE ES FR GB IT NL PT

(30) Priority: **01.11.1996 GB 9622777**

(43) Date of publication of application:
06.05.1998 Bulletin 1998/19

(73) Proprietor: **DS Smith (UK) Limited**
London SW1P 1RZ (GB)

(72) Inventor: **Isenborghs, Francis**
Rugby, Warwickshire, CV21 1HL (GB)

(74) Representative: **Swindell & Pearson**
48 Friar Gate
Derby DE1 1GY (GB)

(56) References cited:
WO-A-96/16823 **GB-A- 2 033 334**
GB-A- 2 277 075 **US-A- 4 727 667**

Note: Within nine months from the publication of the mention of the grant of the European patent, any person may give notice to the European Patent Office of opposition to the European patent granted. Notice of opposition shall be filed in a written reasoned statement. It shall not be deemed to have been filed until the opposition fee has been paid. (Art. 99(1) European Patent Convention).

EP 0 840 271 B1

Description

[0001] This invention relates to labelling processes.

[0002] In the beer and other industries, certain products only have a limited season, for example christmas ale at christmas time. This can cause a problem in the crating of bottles of such products. This means that the bottles have to be crated in unmarked crates, in crates provided with a permanent label relating to the product, or in crates labelled for a different product. Each of these alternatives is unsatisfactory.

[0003] According to this invention there is provided a labelling process comprising a first step of applying a first label permanently to a substrate and thereafter a second step of applying a second label to the substrate such that the second label can be removed from the substrate, wherein, when the second label is so attached, the second label substantially conceals the first label.

[0004] By "a substrate" is herein specifically intended a solid container, such as a crate for holding vessels of a drink, for example bottles or cans of an alcoholic or soft drink, such as beer, lager, cider, wine mineral water, fruit juice, lemonade, or the like.

[0005] The first and second labels can be any printed indicator means applied to the substrate, and the term applying a label is intended to include within its meaning printing directly onto the substrate, as well as printing onto other matter before said other matter is applied to the substrate.

[0006] Preferably, the first label is applied to the substrate by a permanent printing process, for example screen printing.

[0007] The second label is conveniently in the form of a transfer.

[0008] The step of applying the second label may be by attaching the second label to the substrate, which is preferably such that it can be removed from the substrate after application thereto without removing the first label. The removal of the second label is conveniently effected by an appropriate washing process, which may involve directing at the second label, for example by hosing or spraying, appropriate fluid, such as water.

[0009] The second step may comprise attaching the second label to the substrate by a transfer printing process, in order to conceal the first label.

[0010] The second step may include the further steps of providing a label carrier assembly comprising the second label and a carrier carrying the second label, applying the assembly to the substrate to attach the second label to the substrate, and thereafter removing the carrier from the second label to leave the second label attached to the substrate.

[0011] Preferably, the second label comprises an adhesive layer to enable the second label to be attached to the substrate.

[0012] The adhesive layer may comprise a pressure sensitive adhesive whereby when the carrier assembly is applied to the substrate, the application of pressure

to the carrier assembly attaches the second label to the substrate. The carrier assembly may or may not be heated prior to its attachment to the substrate.

[0013] The second label may comprise a plurality of layers including the adhesive layer, a printed layer and a release layer. The second label may also include a substantially opaque layer to conceal the first label. The opaque layer may comprise an ink layer and may be substantially the same colour as the substrate. Alternatively, in certain circumstances, the opaque layer may be a different colour to the substrate.

[0014] The carrier may comprise a film on which the second label is mounted preferably at the release layer. The film may be a film of a plastics material.

[0015] In one embodiment, the carrier assembly comprises a plurality of the second labels mounted in succession on the carrier, and the carrier assembly being wound upon a reel. In this embodiment, the carrier further includes a second release layer mounted on the obverse side of the film whereby to prevent labels adjacent the film becoming attached thereto when the assembly is mounted on the reel.

[0016] According to another aspect of the invention there is provided an arrangement comprising a substrate having a first label substantially permanently attached thereto and a second label substantially concealing the first label, and the second label being removably attached to the substrate.

[0017] The second label is conveniently in the form of a transfer.

[0018] Preferably, the first label is applied to the substrate by a permanent printing process, for example screen printing.

[0019] The substrate may be a container, such as a crate for holding vessels of a drink, for example bottles or cans of an alcoholic or soft drink, such as beer, lager, cider, wine mineral water, fruit juice, lemonade, or the like.

[0020] Preferably, the second label comprises an adhesive layer to enable the second label to be attached to the substrate.

[0021] The adhesive layer may comprise a pressure sensitive adhesive whereby when the carrier assembly is applied to the substrate, the application of pressure to the carrier assembly attaches the second label to the substrate. The carrier assembly may or may not be heated prior to its attachment to the substrate.

[0022] The second label may comprise a plurality of layers including the adhesive layer, a printed layer and a release layer, and the printed layer being arranged conveniently between the adhesive and release layers. The second label may also include a substantially opaque layer to conceal the first label. The opaque layer may comprise an ink layer and may be substantially the same colour as the substrate. Alternatively, in certain circumstances, the opaque layer may be a different colour to the substrate.

[0023] Before being applied to the substrate, the sec-

ond label may constitute part of a carrier assembly, the carrier assembly comprising a carrier, the second label being carried on the carrier.

[0024] The carrier may comprise a film on which the second label is mounted preferably at the release layer. The film may be a film of a plastics material.

[0025] In one embodiment, the carrier assembly comprises a plurality of the second labels mounted in succession on the carrier, and the carrier assembly being wound upon a reel. In this embodiment, the carrier further includes a second release layer mounted on the obverse side of the film whereby to prevent labels adjacent the film becoming attached thereto when the assembly is mounted on the reel.

[0026] An embodiment of the invention will now be described by way of example only with reference to the accompanying drawing which shows schematically a labelling process.

[0027] The process shown in the drawing comprises a process of applying a removable label to a substrate over a permanently affixed label on the substrate, thereby to conceal the permanent label to enable the substrate to be used for purposes other than those for which it was originally intended. For example, in the beer industry, it is a considerable cost saving to be able to reuse crates for products other than the original product. It would be particularly advantageous to be able to use crates which have already been labelled. It would also be advantageous for the crate, after use, to revert to its usual identity.

[0028] The process comprises applying to a substrate, in the form of a crate 10 for beer bottles, a label 12 such that the label 12 is permanently affixed to the crate 10. This can be carried out by any suitable printing process, for example a screen printing process. A crate carrying the label 12 is obviously then suitable for use with the products designated by the label 12 applied to the crate.

[0029] If, however, it is desired to use the crate for other products, this can be done by applying to the crate a second label 14.

[0030] The second label 14 is a multi-layer label comprising an adhesive layer 16, an opaque layer 18, a printed layer 20 and a release layer 22. The printed layer 20 may comprise a plurality of print layers. The label 14 is carried on a carrier 24 which comprises a film of a plastics material 26 and a second release layer 28. The label 14 is mounted on the carrier 24 to form a carrier assembly 30.

[0031] The layer 18 is an opaque layer formed by a suitable ink to conceal the label 12 beneath the label 14. The colour of the ink can be the same colour as that of the crate. The printed layer 20 provided the information which it is desired for the second label 14 to impart. The release layer 22 enables the carrier 24 to be removed from the label 14 without causing damage to the second label 14.

[0032] The carrier assembly 30 is wound upon a reel

32. It will be appreciated that, by being wound on the reel 32, each successive layer of the carrier assembly 30 will be arranged such that the adhesive layer 16 of one second label 14 is in contact with the second release layer 28 of the adjacent carrier 24. The provision of the second release layer 28, therefore, prevents the adhesive layer 16 adhering to the carrier 24.

[0033] The first step in the process involves applying to the crate 10 the first label 12 by an appropriate screen printing process. Immediately afterwards, or some time thereafter, the second label 14 is applied to the crate 10 to cover and conceal the first label 12. The crate 10 is arranged in an appropriate position, and the carrier assembly 30 is unwound from the reel 32. When the second label 14 is arranged in the appropriate position, pressure is applied as represented by the arrows designated P to press the carrier assembly 30 against the crate 10 covering the first label 12. The application of pressure to the carrier 30 causes the adhesive layer 16 to adhere to the crate 10, and when the pressure P is released, the carrier 24 can be removed from the label 14 leaving the label 14 attached to the crate 10. The carrier 24 can then be wound onto a storage reel 34 and can, if desired be reused at some subsequent time. A further crate 10 is then arranged in position, or the same crate 10 is arranged with a different side, facing the carrier assembly 30 and the further of the carrier assembly 30 is unwound from the reel 32 to enable a further second label 14 to be applied to the further crate 10, or to the same crate.

[0034] The film 26 is a suitable plastics film, for example polypropylene or polyethylene.

[0035] After the crate 10 has been used, with the label 14 applied thereto as aforesaid, and is no longer required for the products designated by the label 14, the label 14 can be removed by a suitable washing process, for example by directing at the label 14 in the crate 10 a jet of water from an appropriate hosepipe. When the label 14 has been removed, or all labels 14 have been removed, from the crate 10, the label(s) 12 will be visible. The crate 10 can then be used for products designated by the label 12.

[0036] Various modifications can be made without departing from the scope of the invention, as defined in the following claims.

Claims

1. A labelling process comprising a first step of applying a first label permanently to a substrate and thereafter a second step of applying a second label to the substrate such that the second label can be removed from the substrate, wherein, when the second label is so applied, the second label substantially conceals the first label.
2. A process according to claim 1, wherein the first la-

bel is applied to the substrate by a permanent printing process, for example screen printing.

3. A process according to claim 1 or 2 wherein the step of applying the second label to the substrate is such that it can be removed from the substrate after application thereto substantially without removing the first label.
4. A process according to any preceding claim, wherein the removal of the second label is effected by an appropriate washing process.
5. A process according to claim 4, wherein the washing process involves directing at the second label, for example by hosing or spraying, appropriate fluid, such as water.
6. A process according to any preceding claims, wherein the second step comprises attaching the second label to the substrate by a transfer printing process, in order to temporarily obscure the first label.
7. A process according to any preceding claim, wherein the second label comprises an adhesive layer to enable the second label to be attached to the substrate.
8. A process according to any preceding claim, wherein the second step includes the further steps of providing a label carrier assembly comprising the second label and a carrier carrying the second label, applying the assembly to the substrate to attach the second label to the substrate, and thereafter removing the carrier from the second label to leave the second label attached to the substrate.
9. A process according to claim 8, wherein the adhesive layer comprises a pressure sensitive adhesive whereby when the carrier assembly is applied to the substrate, the application of pressure to the carrier assembly attaches the second label to the substrate.
10. A process according to claim 9, wherein the carrier assembly may or may not be heated prior to its attachment to the substrate.
11. A process according to claim 7 or any of claims 8 to 10 when dependent on claim 7 wherein the second label comprises a plurality of layers including the adhesive layer, a printed layer and a release layer.
12. A process according to claim 11, wherein the second label also includes a substantially opaque layer to conceal the first label.

13. A process according to claim 12, wherein the opaque layer comprises an ink layer and is substantially the same colour as the substrate.

14. A process according to claim 7, wherein the carrier comprises a film on which the second label is mounted at the release layer.

15. A process according to claim 8, wherein the carrier assembly comprises a plurality of the second labels mounted in succession on the carrier, the carrier assembly being wound upon a reel, the carrier further including a second release layer mounted on the obverse side of the film whereby to prevent labels adjacent the film becoming attached thereto when the assembly is mounted on the reel.

16. An arrangement comprising a substrate, a first label applied permanently to the substrate and a second label applied to the substrate, wherein the second label substantially conceals the first label, and the second label is removably attached to the substrate.

17. An arrangement according to claim 16, wherein the first label is applied to the substrate by a permanent printing process, for example screen printing.

18. An arrangement according to claim 16 or 17 wherein the second label is in the form of a transfer.

19. An arrangement according to any claim 16, 17 or 18 wherein the second label comprises an adhesive layer to enable the second label to be attached to the substrate.

20. An arrangement according to claim 19 wherein the adhesive layer comprises a pressure sensitive adhesive.

21. An arrangement according to claim 19 or 20 wherein the second label comprises a plurality of layers including the adhesive layer, a printed layer and a release layer.

22. An arrangement according to claim 21, wherein the second label also includes a substantially opaque layer to conceal the first label.

23. An arrangement according to claim 22, wherein the opaque layer comprises an ink layer and is substantially the same colour as the substrate.

Patentansprüche

1. Etikettierverfahren mit einem ersten Schritt zum dauerhaften Anbringen eines ersten Etiketts an ei-

- nem Substrat und anschließend einem zweiten Schritt zum Anbringen eines zweiten Etiketts an dem Substrat, so dass das zweite Etikett von dem Substrat entfernt werden kann, wobei beim derartigen Anbringen des zweiten Etiketts das zweite Etikett das erste Etikett im wesentlichen verdeckt. 5
2. Verfahren nach Anspruch 1, **dadurch gekennzeichnet, dass** das erste Etikett an dem Substrat durch einen Dauerhaftdruck-Prozess, wie z.B. Siebdruck, angebracht wird. 10
 3. Verfahren nach Anspruch 1 oder 2, **dadurch gekennzeichnet, dass** der Schritt zum Anbringen des zweiten Etiketts an dem Substrat derart ist, dass es von dem Substrat nach seiner Anbringung daran im wesentlichen ohne Entfernen des ersten Etiketts entfernt werden kann. 15
 4. Verfahren nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** das Entfernen des zweiten Etiketts durch einen geeigneten Waschprozess durchgeführt wird. 20
 5. Verfahren nach Anspruch 4, **dadurch gekennzeichnet, dass** bei dem Waschprozess ein geeignetes Fluid, wie z.B. Wasser, auf das zweite Etikett z.B. durch Abspritzen mit einem Schlauch oder Besprühen gerichtet wird. 25
 6. Verfahren nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** der zweite Schritt das Befestigen des zweiten Etiketts an dem Substrat durch einen Transferdruck-Prozess aufweist, um das erste Etikett vorübergehend zu verdunkeln. 30
 7. Verfahren nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** das zweite Etikett eine Klebeschicht aufweist, um das Befestigen des zweiten Etiketts an dem Substrat zu ermöglichen. 35
 8. Verfahren nach einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** der zweite Schritt die folgenden weiteren Schritte enthält: Bereitstellen einer Etikettträger-Anordnung mit dem zweiten Etikett und einem das zweite Etikett tragenden Träger, Anbringen der Anordnung an dem Substrat, um das zweite Etikett an dem Substrat zu befestigen, und anschließendes Entfernen des Trägers von dem zweiten Etikett, damit das zweite Etikett an dem Substrat befestigt bleibt. 40
 9. Verfahren nach Anspruch 8, **dadurch gekennzeichnet, dass** die Haftschicht einen druckempfindlichen Klebstoff aufweist, wodurch beim Anbringen der Trägeranordnung an dem Substrat das 45
- Ausüben von Druck auf die Trägeranordnung das zweite Etikett an dem Substrat befestigt.
10. Verfahren nach Anspruch 9, **dadurch gekennzeichnet, dass** die Trägeranordnung vor ihrer Befestigung an dem Substrat beheizt oder nicht beheizt werden kann. 50
 11. Verfahren nach Anspruch 7 oder einem der Ansprüche 8 bis 10, wenn diese von Anspruch 7 abhängig sind, **dadurch gekennzeichnet, dass** das zweite Etikett eine Vielzahl von Schichten aufweist, welche die Klebeschicht, eine gedruckte Schicht und eine Ablöseschicht enthalten. 55
 12. Verfahren nach Anspruch 11, **dadurch gekennzeichnet, dass** das zweite Etikett auch eine im wesentlichen undurchsichtige Schicht enthält, um das erste Etikett zu verdecken.
 13. Verfahren nach Anspruch 12, **dadurch gekennzeichnet, dass** die undurchsichtige Schicht eine Druckfarbschicht aufweist und im wesentlichen dieselbe Farbe wie das Substrat hat.
 14. Verfahren nach Anspruch 7, **dadurch gekennzeichnet, dass** der Träger einen Film aufweist, auf dem das zweite Etikett an der Ablöseschicht befestigt ist.
 15. Verfahren nach Anspruch 8, **dadurch gekennzeichnet, dass** die Trägeranordnung eine Vielzahl der zweiten Etiketten aufweist, die der Reihe nach auf dem Träger befestigt werden, wobei die Trägeranordnung auf einer Spule aufgewickelt ist und der Träger außerdem eine zweite Ablöseschicht enthält, die an der Kehrseite des Films befestigt ist, wodurch verhindert wird, dass zu dem Film benachbarte Etiketten daran befestigt werden, wenn die Anordnung an der Spule montiert ist.
 16. Anordnung, welche ein Substrat, ein an dem Substrat dauerhaft angebrachtes erstes Etikett und ein an dem Substrat angebrachtes zweites Etikett aufweist, wobei das zweite Etikett das erste Etikett im wesentlichen verdeckt und das zweite Etikett an dem Substrat ablösbar befestigt ist.
 17. Anordnung nach Anspruch 16, **dadurch gekennzeichnet, dass** das erste Etikett an dem Substrat durch einen Dauerhaftdruck-Prozess, z.B. Siebdruck, angebracht ist.
 18. Anordnung nach Anspruch 16 oder 17, **dadurch gekennzeichnet, dass** das zweite Etikett in Form einer Übertragung bzw. eines Abziehbilds vorliegt.
 19. Anordnung nach einem der Ansprüche 16, 17 oder

18, **dadurch gekennzeichnet, dass** das zweite Etikett eine Klebschicht aufweist, um zu ermöglichen, dass das zweite Etikett an dem Substrat befestigt wird.

20. Anordnung nach Anspruch 19, **dadurch gekennzeichnet, dass** die Klebeschicht einen druckempfindlichen Klebstoff aufweist.

21. Anordnung nach Anspruch 19 oder 20, **dadurch gekennzeichnet, dass** das zweite Etikett eine Vielzahl von Schichten aufweist, welche die Klebeschicht, eine gedruckte Schicht und eine Ablöschschicht enthält.

22. Anordnung nach Anspruch 21, **dadurch gekennzeichnet, dass** das zweite Etikett ebenfalls eine im wesentlichen undurchsichtige Schicht enthält, um das erste Etikett zu verdecken.

23. Anordnung nach Anspruch 22, **dadurch gekennzeichnet, dass** die undurchsichtige Schicht eine Druckfarbschicht aufweist und im wesentlichen dieselbe Farbe wie das Substrat hat.

Revendications

1. Procédé d'étiquetage comprenant une première étape consistant à appliquer de façon permanente une première étiquette sur un substrat, puis une deuxième étape consistant à appliquer une deuxième étiquette sur le substrat de telle sorte que la deuxième étiquette puisse être retirée du substrat, dans lequel, lorsque la deuxième étiquette est ainsi appliquée, la deuxième étiquette cache sensiblement la première étiquette.

2. Procédé selon la revendication 1, dans lequel la première étiquette est appliquée sur le substrat par un procédé d'impression permanente, par exemple par sérigraphie.

3. Procédé selon la revendication 1 ou 2, dans lequel l'étape consistant à appliquer la deuxième étiquette sur le substrat se déroule de telle sorte que celle-ci peut être retirée du substrat, après son application sur celui-ci, sensiblement sans retirer la première étiquette.

4. Procédé selon l'une quelconque des revendications précédentes, dans lequel le retrait de la deuxième étiquette s'effectue grâce à un procédé de lavage approprié.

5. Procédé selon la revendication 4, dans lequel le procédé de lavage implique le fait de diriger, sur la deuxième étiquette, par exemple par lavage au jet

ou par pulvérisation, un fluide adapté, tel que l'eau.

6. Procédé selon l'une quelconque des revendications précédentes, dans lequel la deuxième étape comprend la fixation de la deuxième étiquette sur le substrat grâce à un procédé d'impression-transfert, afin de masquer temporairement la première étiquette.

7. Procédé selon l'une quelconque des revendications précédentes, dans lequel la deuxième étiquette comprend une couche adhésive pour permettre à la deuxième étiquette d'être fixée sur le substrat.

8. Procédé selon l'une quelconque des revendications précédentes, dans lequel la deuxième étape comprend en outre les actions qui consistent à prévoir un ensemble porteur d'étiquettes comprenant la deuxième étiquette et un support portant la deuxième étiquette, à appliquer l'ensemble sur le substrat pour fixer la deuxième étiquette sur le substrat, puis à dégager le support de la deuxième étiquette afin que la deuxième étiquette reste fixée sur le substrat.

9. Procédé selon la revendication 8, dans lequel la couche adhésive comprend une matière auto-adhésive afin que, lorsque l'ensemble porteur est appliqué sur le substrat, l'application d'une pression sur l'ensemble porteur fixe la deuxième étiquette sur le substrat.

10. Procédé selon la revendication 9, dans lequel l'ensemble porteur peut être chauffé, ou non, avant sa fixation sur le substrat.

11. Procédé selon la revendication 7 ou l'une quelconque des revendications 8 à 10 lorsqu'elle est rattachée à la revendication 7, dans lequel la deuxième étiquette comprend une pluralité de couches incluant la couche adhésive, une couche imprimée et une couche antiadhésive.

12. Procédé selon la revendication 11, dans lequel la deuxième étiquette comprend également une couche sensiblement opaque pour cacher la première étiquette.

13. Procédé selon la revendication 12, dans lequel la couche opaque comprend une couche d'encre et est sensiblement de la même couleur que le substrat.

14. Procédé selon la revendication 7, dans lequel le support comprend une pellicule sur laquelle la deuxième étiquette est montée au niveau de la couche antiadhésive.

15. Procédé selon la revendication 8, dans lequel l'ensemble porteur comprend une pluralité de deuxièmees étiquettes montées les unes à la suite des autres sur le support, l'ensemble porteur étant enroulé sur un dévidoir, le support comprenant, en outre, une deuxième couche antiadhésive prévue sur le recto de la pellicule afin d'empêcher les étiquettes adjacentes à la pellicule de s'y coller lorsque l'ensemble est monté sur le dévidoir. 5
10
16. Agencement comprenant un substrat, une première étiquette appliquée de façon permanente sur le substrat, et une deuxième étiquette appliquée sur le substrat, dans lequel la deuxième étiquette cache sensiblement la première étiquette, et la deuxième étiquette est fixée de façon détachable sur le substrat. 15
17. Agencement selon la revendication 16, dans lequel la première étiquette est appliquée sur le substrat par un procédé d'impression permanente, par exemple par sérigraphie. 20
18. Agencement selon la revendication 16 ou 17, dans lequel la deuxième étiquette se présente sous la forme d'un transfert. 25
19. Agencement selon l'une quelconque des revendications 16, 17 ou 18, dans lequel la deuxième étiquette comprend une couche adhésive permettant à la deuxième étiquette d'être fixée sur le substrat. 30
20. Agencement selon la revendication 19, dans lequel la couche adhésive comprend une matière auto-adhésive. 35
21. Agencement selon la revendication 19 ou 20, dans lequel la deuxième étiquette comprend une pluralité de couches comprenant la couche adhésive, une couche imprimée et une couche antiadhésive. 40
22. Agencement selon la revendication 21, dans lequel la deuxième étiquette comprend également une couche sensiblement opaque destinée à cacher la première étiquette. 45
23. Agencement selon la revendication 22, dans lequel la couche opaque comprend une couche d'encre et est sensiblement de la même couleur que le substrat. 50

55

