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**D E C I S I O N**  
of 7 September 1998

**Case Number:** T 0489/97 - 3.2.4

**Application Number:** 83308035.1

**Publication Number:** 0113256

**IPC:** B65C 9/18

**Language of the proceedings:** EN

**Title of invention:**  
Improvements in or relating to labelling apparatus

**Applicant:**  
Sinclair International Limited

**Opponent:**  
-

**Headword:**  
-

**Relevant legal provisions:**  
EPC Art. 56

**Keyword:**  
"Inventive step - yes"

**Decisions cited:**  
-

**Catchword:**  
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Boards of Appeal

Chambres de recours

Case Number: T 0489/97 - 3.2.4

**D E C I S I O N**  
of the Technical Board of Appeal 3.2.4  
of 7 September 1998

**Appellant:** Sinclair Internaitonal Limited  
22 Hellesden Hall Industrial Park  
Norwich, NR6 1DR (GB)

**Representative:** Low, Peter John  
Wilson, Gunn, M'Caw  
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**Decision under appeal:** Decision of the Examining Division of the  
European Patent Office posted 20 January 1997  
refusing European patent application  
No. 83 308 035.1 pursuant to Article 97(1) EPC.

**Composition of the Board:**

**Chairman:** C. A. J. Andries  
**Members:** M. G. Hatherly  
J. P. B. Seitz

## Summary of Facts and Submissions

- I. On 17 February 1997 the appellants (applicants) filed an appeal against the decision of the examining division dispatched on 20 January 1997 to refuse the European patent application No. 83 308 035.1 (publication No. 0 113 256). The appeal fee was paid on 14 February 1997 and the statement of grounds of appeal was received on 19 April 1997.

The decision under appeal cites the following documents:

- D1: FR-A-2 291 096
- D2: US-A-4 253 902
- D3: EP-A-0 031 383
- D4: GB-A-1 563 892

- II. The examining division found that it would be obvious for the skilled person, starting from the labelling apparatus known from document D4 and using the teachings of documents D1 to D3, to arrive at a labelling apparatus as defined by claim 1.

In the appeal proceedings, the appellants argue that the examining division misinterpreted the prior art and so wrongly arrived at the finding of lack of inventive step.

- III. Following communications and discussions by telephone, the appellants filed, by letter of 14 August 1998, new application documents, of which claim 1 reads:

"A high speed labelling apparatus for sequentially separating labels (22) from a carrier strip (20) and applying the labels to fruit, said apparatus comprising a label applying means (120,124), means (140) for

moving the label applying means (120,124) between a label receiving position and a label applying position, rotating the label applying means in one direction continuously, means (32) for separating a label from the carrier strip, means for mutually bringing the label applying means into contact with a label and means for advancing the carrier strip and the label applying means (120,124) synchronously so that said label is separated from the carrier strip by the separating means (32) in a direction substantially the same as the direction of movement of the label applying means (120,124) into the label receiving position, means adapted to expand the label applying means (120,124) at said label applying position for depositing a label on a fruit object and thereafter to retract the label applying means, wherein the means for mutually bringing the label applying means into contact with a label comprises means (56, 58) for advancing the carrier strip over the separating means to achieve a speed equalling the circumferential speed of the label applying means (120,124) prior to moving the separating means (32) from a first position remote from the label applying means (120,124) to a second position adjacent the label applying means (120,124) and means (82) to return the separating means (32) to the first position."

IV. The appellants request that the examining division's decision be set aside and a patent be granted on the basis of the following application documents:

**Claims:** 1 to 15 filed with the letter of  
14 August 1998

**Description:** pages 1 to 4, 4a, 11 to 13 filed with the  
letter of 14 August 1998  
pages 5 to 10, 14 and 15 as originally  
filed

**Drawings:** sheets 1/5 to 5/5 (Figures 1 to 6) as originally filed.

### Reasons for the Decision

1. The appeal is admissible.

2. *Amendments*

2.1 Claim 1 is similar to the claim refused by the examining division for lack of inventive step but against which no objections under Article 123 EPC were made. In most cases the additions to and clarifications of the originally filed claim 1 can readily be seen to be based on the originally filed description and drawings. The board will thus confine itself to commenting on two points.

The alternative to fruit of "vegetables" has been removed since it could not be found in the originally filed application.

The speed equalling feature of the carrier strip and label applying means prior to movement of the separating means is based on lines 14 to 16 of page 12 of the originally filed description which state that "Preferably the speed of movement of the label at the moment of contact with a bellows should **not be less than** the linear speed of the bellows." This is a range from speed equality upwards with no upper end, defining clearly thereby at least the lower limit. The board can accept in this particular case the amendment restricting the speed relationship to the lower end of this range.

- 2.2 The present claim 2 clarifies the originally filed claim 2. Claims 3 to 15 correspond to the originally filed claims 4 to 6, 8 to 11 and 13 to 18 respectively.
- 2.3 The present description is merely a rearrangement of the originally filed description with some more acknowledgement of the prior art and adaptation to the present claims.
- 2.4 The drawings are those originally filed.
- 2.5 Thus the board sees no objection under Article 123(2) EPC to the present version of the application.

3. *Novelty*

The board finds that the subject-matter of claim 1 is novel in the sense of Article 54 EPC. This was not in dispute.

4. *Closest prior art, problem and solution*

4.1 The board agrees with the appellants and the examining division that the prior art closest to the present invention is the labelling apparatus of D4.

4.2 As shown in Figures 1 and 4 of D4, a label strip 10 is drawn over a separator plate 22 to free labels 14 (see page 3, lines 13 to 59). As explained between page 3, line 92 and page 4, line 14, a plate 72 (shown in Figures 6 and 7) supports a plunger apparatus 70 comprising a bellows 74 which is moved from a label receiving position 74c to a label applying position 74b at which the bellows is expanded as shown at 78b to apply the label to an article A (as shown in Figures 1 and 4).

4.3 The apparatus of D4 differs from that defined by claim 1 in various ways.

4.3.1 Figure 5 of the present patent application shows that the label applying means comprises a drum carrying a plurality of bellows 124 which pass the separating end of the separator plate 32 always in a clockwise direction. The corresponding part of the present claim 1 states that means are provided for rotating the label applying means 120, 124 in **one direction** continuously.

In contrast, it can be seen from the arrow 86 on Figure 7 of D4 that the plate 72 and bellows 74 are **reciprocated** between the label receiving position 74c and the label applying position 74b (see also page 5, lines 96 to 100).

4.3.2 Figure 5 of the present patent application shows that each bellows 124 moves clockwise (i.e. to the right) into the label receiving position at the right hand end of the separator plate 32 and that the separation of the label also takes place to the right. The corresponding part of the present claim 1 states that "said label is separated from the carrier strip by the separating means (32) in a **direction substantially the same** as the direction of movement of the label applying means (120,124) into the label receiving position".

On Figures 4 and 7 of D4 it can be seen that, although the label separation once again takes place to the right, the bellows 74 moves leftwardly into the label receiving position 74c i.e. in the **opposite direction**.

4.3.3 Commencing on page 4 at line 118, D4 explains that a crank 103 moves a slide 104 (to the left in Figure 5).

This slide 104 moves the tow bar 130, plate 72 and bellows 74 (see Figures 5 to 7) "to the position indicated at 74c wherein the face of the bellows at 78c lies over the next label to be separated from the backing strip" (see page 4, lines 1 to 4). Since the plate 72 is fixed to the slide 104 (see Figure 6), the extreme leftwards position 74c of the bellows in Figure 7 must correspond to the extreme leftwards position of the slide 104. Lines 4 to 6 of page 4 explain that "Thereafter the bellows support plate moves down so the bellows engages a label".

The "feed roll 64 cannot turn until a predetermined time in each cycle" (see page 5, lines 19 to 21). Referring to Figure 5, the slide moves leftwardly and at or about at the end of this movement, a pin 117 hits a pawl 119 which releases a wheel 121 so that the feed shaft 114 for the feed roll 64 turns. Page 5, lines 21 to 28 explains that the feed roll is rotated to advance the label strip by a distance S (on Figure 5) whereupon the feed shaft 114 stops. Thus the label strip is advanced not continuously but intermittently and the next label to be separated is stationary "at the position 14p shown in Figure 5, which is the position at which the face of the bellows descends against the label" (see page 5, lines 68 to 71).

Accordingly the lowering of the bellows onto the label and the start of movement of the label occur at approximately the same time. The board concludes that the label is at least approximately **stationary** when the bellows contacts it. This is consistent with the statement in lines 63 and 64 of page 5 that "the bellows 74 descends against a label and begins moving forwardly with the label".

The present claim 1, on the other hand specifies that the label applying means moves continuously and the speed of the carrier strip **equals** the speed of the label applying means prior to contact.

- 4.3.4 Page 4, lines 4 to 6 of D4 explain that "the bellows support plate moves down, so the bellows engages a label". Thus the label applying means 72, 74 moves towards the separating means (plate 22).

The present claim 1 however specifies the **opposite**, namely that the separating means 32 moves towards the label applying means 120, 124.

- 4.4 The problem to be solved is to increase the speed of operation of the labelling apparatus known from D4.

- 4.5 The board is satisfied that this problem is solved by the features of the present claim 1, in particular by rotating the label applying means 120, 124 in one direction continuously (instead of reciprocating it and losing time when reversing direction at the two end points).

Of course it would be unacceptable to increase the speed of operation if the results were poor. The label is transferred properly from the carrier strip to the label applying means by matching their speeds prior to contact.

Figure 5 of the present application shows a hexagonal drum with a plurality of bellows 124. A high labelling speed can be achieved with a reasonable rotational speed since a label can be received from the carrier strip at the same time that a label is applied to an object. If the drum had to move towards the separating plate 32 to receive a label then at the same moment the

drum would be moving away from the article that is to be labelled. Thus the feature of claim 1 that it is the separating means which moves towards the label applying means is advantageous.

5. *Prior art document D2*

5.1 Figure 1 of D2 shows a peeling blade 11 for removing a label 9 from a strip 10 for transfer to a sucking slit 2 on a rotary drum 1 to be transported for attachment to an article 18.

5.2 Lines 9 to 19 of column 2 state that "The label the tip of which has been peeled ... stands still to wait for the label-sucking slit of the rotary drum to come near the label tip ... When the sucking slit of the rotary drum comes near the label tip and sucks it thereonto, the partially peeled label and the sucking slit will begin their movement at the same velocity in the same direction to smoothly peel the label entirely from the mount while the whole of the label is sucked onto the sucking slit."

5.3 Thus, when the tip of the label has been peeled from the strip, the label waits for the suction opening of the label applying drum to approach and attract it. Only thereafter will the label more or less instantaneously begin to follow the speed of the drum due to interaction between a pin 21 on the drum and a bar 20 on the pivotable support plate 4 with the carrier strip, see column 3, lines 26 to 33. Hence the label is first partly transferred to the drum and only then accelerated to match the speed thereof.

6. *Prior art document D3*

6.1 Figure 3 of prior art document D3 shows a label 5 being separated from a strip 3 (or carrier means 2) to be transported by a roller 14 for attachment to an article 42. Page 2, lines 8 to 12 state that "a plurality of labels ... are successively peeled off from the strip. During this separation, the labels are charged with static electricity." Page 5, lines 4 to 6 add that "the carrier means is charged with static electricity by friction caused, when the labels 5 are peeled from the strip."

6.2 The appellants argued before the examining division (see the first paragraph of section 7 of the decision) that the friction necessary to create the static electricity occurs between the label and the roller, concluding from this that the carrier means cannot be moving at the time the label first contacts the roller.

6.3 The examining division replied (see the second paragraph of section 7 of the decision) that the aforementioned friction and the static electricity charge result from the separation of the labels from carrier means, i.e. while the labels are moving. Moreover lines 1 and 2 of page 4 state that "When carrier means 2 comes to the separating station 8 it is forced against a silicone rubber cover 15 on separating or turnover roller ... thereby peeling the labels 5 from the strip 3" and so imply that the carrier is moving when brought into contact with the roller. However the examining division admits in the third paragraph of section 7 of the decision that "D3 does not disclose the correct timing of the apparatus and in particular of the label advancing means".

6.4 In section 8 of the statement of grounds of appeal the appellants add that the carrier means 2 is forwarded only due to the combined effect of belt 9b acting on shaft 9 together with the friction between the carrier means 2 and the roller 14 when the weighting lever 10 is lowered so as to bring the carrier means 2 into contact with the roller 14. They conclude from this that the carrier means cannot be moving at the time the label first contacts the roller.

6.5 The board considers that the disclosure of D3 is not clear enough to be able to resolve this dispute and so will confine itself at this point to making two comments. Firstly that the real doubts that exist as to the disclosure of D3 should not work to the detriment of the applicants. Secondly that even the examining division is not arguing that the carrier means and the label applying means are moving at the same speed upon contact (cf. the present claim 1).

7. *Inventive step*

7.1 The examining division, citing D2 and D3, argues that the skilled person wishing to increase labelling speed of the apparatus of D4 would consider redesigning it so it rotated continuously. Further, it is a direct and evident consequence that also the timing should be changed such that the supplying means and the applying means approach each other only after acceleration of the label to be transferred up to the speed of the applying means. Finally, it is a simple kinematic inversion to move the supplying means to the applying means rather than vice versa.

7.2 Combination of D4 and D2

7.2.1 If the skilled person wished to make the drive of the labelling apparatus of D4 rotary instead of reciprocatory using the teachings of D2, then the board considers it likely that he would take the rotary drum 1 as a whole with its sucking slit 2 of D2 to replace the plate 72 and plunger apparatus 70 of Figure 6 of D4. Then however he would have a label applying means which is not expandable and so he would not arrive at the subject-matter of claim 1.

7.2.2 The combination on the other hand of the drum of D2 and the plunger apparatus of D4 does not seem to the board something that the skilled person (being merely a skilled person and not an inventor) would do. The skilled person in this mechanical field, works on a practical rather than a theoretical level. Thus, while well aware of reciprocating and rotary mechanisms, he will be considering these in the concrete terms of the apparatuses of documents D2 to D4, rather than as reciprocating and rotary mechanisms in abstract terms.

7.2.3 While in general terms it seems logical to match speeds when transferring an object between two moving elements, the board notes that this is disclosed by neither D4 (see section 4.3.3 above) nor D2 (see section 5.3 above) so that a combination of their teachings fails also for this reason to yield the subject-matter of claim 1.

7.3 Combination of D4 and D3

7.3.1 If the skilled person wished to use the teachings of D3 to make the drive of the labelling apparatus of D4 rotary instead of reciprocatory, then he would need to make some choices as to which parts of one apparatus he should use and which parts of the other. The board does

not consider that he would be led to use the plunger apparatus 70 of Figure 6 of D4 (but not its supporting plate 72) and add the drum 14 of D3 (but not its silicone rubber cover 15), see also the comments in the above section 7.2.2. Accordingly the board cannot see that he would arrive at a label applying means which is expandable and so satisfies claim 1.

7.3.2 Moving now to the speed matching aspect, the applicants and the examining division have argued at length concerning D3 whether the carrier means is moving at the time the label first contacts the roller. These detailed speed considerations are linked to the method used in D3 to separate the labels and the skilled person would only be interested in them if he too was intending to use friction to generate static electricity to separate the labels. If so, he would be changing the apparatus of D4 in a radical way that could not be obvious starting from D4, indeed then he should have started from D3. If he is not intending to use static electricity for label separation then the speed considerations when separating labels using static electricity will not interest him. Moreover the board finds that neither D4 (see section 4.3.3 above) nor D3 (see sections 6.3 and 6.5 above) discloses the presently claimed speed matching.

7.4 Thus the board finds that the skilled person would not arrive at the subject-matter of claim 1 in an obvious manner when considering the teachings of D2 to D4.

7.5 This said, the simple kinematic inversion alleged by the examining division need not be discussed (although the board does comment that the labelling machine of D1 is of such a basically different type that it would not be consulted by the skilled person in this case).

- 7.6 The subject-matter of claim 1 is thus not obvious.
8. A patent may therefore be granted with this independent claim and claims 2 to 15 which are dependent thereon.

### Order

#### For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the first instance with the order to grant a patent in the following version:

**Claims:** 1 to 15 filed with the letter of 14 August 1998

**Description:** pages 1 to 4, 4a, 11 to 13 filed with the letter of 14 August 1998  
pages 5 to 10, 14 and 15 as originally filed

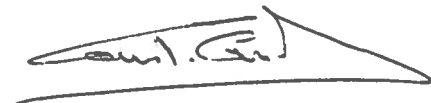
**Drawings:** sheets 1/5 to 5/5 (Figures 1 to 6) as originally filed.

The Registrar:



N. Maslin

The Chairman:



C. Andries

The first part of the report is devoted to a general survey of the situation in the country.

A second part contains a detailed description of the various regions and their characteristics.

The third part of the report deals with the economic situation and the progress of the country.

The fourth part of the report is devoted to a description of the various industries and their products.

The fifth part of the report contains a detailed description of the various cities and towns and their population.

The sixth part of the report deals with the various educational institutions and their progress.

The seventh part of the report contains a detailed description of the various social and cultural institutions.

The eighth part of the report deals with the various public works and their progress.

The ninth part of the report contains a detailed description of the various public buildings and their architecture.

The tenth part of the report deals with the various public services and their progress.

The eleventh part of the report contains a detailed description of the various public works and their progress.

The twelfth part of the report deals with the various public services and their progress.