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**D E C I S I O N**  
**of 27 April 2004**

**Case Number:** T 1026/01 - 3.2.5

**Application Number:** 91920404.0

**Publication Number:** 0558574

**IPC:** B24D 15/00

**Language of the proceedings:** EN

**Title of invention:**

Security device and authenticatable item

**Patentee:**

De La Rue International Limited

**Opponent:**

Giesecke & Devrient GmbH

**Headword:**

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**Relevant legal provisions:**

EPC Art. 54, 56, 84, 123(2)

**Keyword:**

"Clarity (yes)"

"Added subject-matter (no)"

"Novelty (main request and second auxiliary request, no; first auxiliary request, yes)"

"Inventive step (no)"

**Decisions cited:**

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**Catchword:**

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Case Number: T 1026/01 - 3.2.5

**D E C I S I O N**  
of the Technical Board of Appeal 3.2.5  
of 27 April 2004

**Appellant:** De La Rue International Limited  
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**Representative:** Skone James, Robert Edmund  
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**Respondent:** Giesecke & Devrient GmbH  
(Opponent) Prinzregentenstr. 159  
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**Representative:** Klunker . Schmitt-Nilson . Hirsch  
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**Decision under appeal:** Decision of the Opposition Division of the  
European Patent Office posted 26 July 2001  
revoking European patent No. 0558574 pursuant  
to Article 102(1) EPC.

**Composition of the Board:**

**Chairman:** W. Moser  
**Members:** W. Widmeier  
H. M. Schram

## Summary of Facts and Submissions

- I. The appellant (patent proprietor) lodged an appeal against the decision of the Opposition Division revoking European patent No. 0 558 574.

The Opposition Division held that the subject-matter of claim 1 lacked novelty.

- II. Oral proceedings were held before the Board of Appeal on 27 April 2004.

- III. The appellant requested that the decision under appeal be set aside and that the patent be maintained on the basis of the following documents:

(i) claims 1 to 20 submitted as main request on 23 November 2001; or

(ii) claims 1 to 19 submitted as first auxiliary request on 23 November 2001; or

(iii) claims 1 to 5 and claims 6 to 19 submitted as second auxiliary request respectively on 23 January 2003 and 23 March 2004.

The respondent (opponent) requested that the appeal be dismissed.

- IV. The following documents were referred to in the appeal procedure:

D1: WO 90/07133

D2: US-A-4 568 141

D3: Original of a visitor card of the Fund Bank,  
dated 1988

D4: "Holography Works, Applications of Holography in  
Industry and Commerce", J. Caulfield et al.,  
New York 1983, cover page, page 2, pages 15 to 20  
and 58

V. Claim 1 according to the main request reads:

"1. An article carrying a security device in the form of an authenticated item (3) wherein the article and security device can be crumpled, the security device enabling the article to be authenticated in the crumpled condition, the security device carrying a number of optically diffracting areas wherein under white light illumination the optically diffracting areas generate a number of prominent, readily recognizable, individual symbols (4A-4C;6A-6C) identifiable to the unassisted naked eye, there being at least two sets of at least three symbols, wherein all the symbols within a set are substantially identical, and are positioned in a non-overlapping, regular geometric arrangement, wherein the symbols of one set have a different shape from the symbols of the other set, and wherein the appearance of the symbols (4A-4C;6A-6C) varies due to the variation in diffractive performance of the diffracting areas on viewing the diffracting areas at different inclination viewing angles such that the angularly variable appearance of the symbols indicates that the item is authentic, and wherein the symbols within a set exhibit

substantially the same optical appearance at at least one common viewing angle of inclination; and wherein the symbols of the two sets exhibit mutually opposed variations in optical performance as the viewing angle of inclination varies."

Claim 1 according to the first auxiliary request and claim 1 according to the second auxiliary request are supplemented with respect to claim 1 according to the main request after "wherein the symbols of one set have a different shape from the symbols of the other set" by the features "wherein each symbol of one set overlaps a symbol of the other set" and "wherein the symbols are perceptibly spaced apart", respectively.

VI. The appellant argued essentially as follows:

The term "crumpled" in claim 1 according to the main request is used in connection with an article carrying a security device. Thus, the meaning of this term is clear for a person skilled in the art. The passage in column 7, lines 29 to 37, of the patent in suit was deleted because of a restriction of the claims and does not lead to doubts about the meaning of "crumpled".

Symbols of different shapes are disclosed in the application as filed on page 3, lines 31 to 34 and on page 17, lines 12 to 23, in combination with Figure 12.

The feature that the symbols of one set have a different shape from the other set distinguishes the subject-matter of claim 1 according to the main request from the security device according to documents D1 and D2. A further difference with respect to these

documents is that the symbols are prominent and readily recognizable. Thus, the subject-matter of claim 1 according to the main request is novel with respect to documents D1 and D2.

The article submitted by the respondent as document D3 will not be crumpled in normal use. Furthermore, even if it is inadvertently crumpled, as demonstrated by the respondent, it can no longer be authenticated. Thus, there exist two differences between the subject-matter of claim 1 according to the main request and document D3.

The subject-matter of claim 1 according to the first auxiliary request has a further feature which distinguishes it from document D3. This feature is constituted by the overlapping symbols. In document D3 the symbols of one set are spaced apart from the symbols of the other set. A modification of the sets of symbols of document D3 such that each symbol of one set overlaps a symbol of the other set is not obvious. Document D4 shows overlapping symbols on a rigid plastic card. However, the teaching of this document cannot be applied to articles which can be crumpled. The subject-matter of claim 1 according to the first auxiliary request thus involves an inventive step.

The feature "wherein the symbols are perceptibly spaced apart" of the subject-matter of claim 1 according to the second auxiliary request constitutes a further difference with respect to document D2.

VII. The respondent argued essentially as follows:

The term "crumpled" used in claim 1 according to the main request and the auxiliary requests lacks clarity. An English-German dictionary lists various translations for this term so that its true meaning in the claim remains obscure. Moreover, the passage in column 7, lines 29 to 37, of the patent in suit refers to security devices which show resistance to crumpling.

The feature "the symbols of one set having a different shape from the symbols of the other set" is not disclosed in the application as filed. Figure 2 of the application as filed shows symbols of different size rather than of different shape.

Document D3 is a visitor card of the Fund Bank and represents the closest prior art. As easily demonstrated, this document can be crumpled and still be authenticated in the crumpled condition so that it has all the features of the article specified in claim 1 according to the main request.

Document D3 also shows the additional feature of claim 1 according to the second auxiliary request so that also the subject-matter of this claim lacks novelty.

The symbols of the two sets of symbols of document D3 do not overlap. However, document D4 teaches a person skilled in the art that symbols consisting of diffracting areas may be arranged in an overlapping manner. Although document D4 relates to a rigid plastic card, this is a general teaching which can be applied

directly to any article carrying a security device. Thus, the subject-matter of claim 1 according to the first auxiliary request does not involve an inventive step.

## **Reasons for the Decision**

### 1. *Articles 84 and 123(2) EPC*

The objections raised by the respondent under Articles 84 and 123(2) EPC concern both the main request and the auxiliary requests.

1.1 The term "crumpled" in claim 1, which is considered by the respondent to lack clarity, is a well known term understandable to a person skilled in the art of articles carrying a security device such as, for example, banknotes (cf. document D2, column 1, lines 31 and 32). The translations for this term cited by the respondent from an English-German dictionary cover the spectrum of treatment an article carrying a security device may undergo, and a skilled reader of claim 1 will associate himself or herself with this term. The deletion of the passage in column 7, lines 29 to 37, of the patent in suit was necessary in order to achieve conformity between claims and description. However, it cannot change the understanding of the term "crumpled". The Board is therefore satisfied that claim 1 meets the requirements of Article 84 EPC.

1.2 The application as filed discloses in Figures 12 to 17 and 19 (A) and (B) and the corresponding description on page 17, line 12 to page 19, line 36 (PCT publication



WO 92/09444) sets of symbols of a security device, wherein the symbols of one set have a different shape from the symbols of the other set. As admitted by the appellant, the embodiment shown in Figure 2 of the patent in suit does no longer fall within the scope of claim 1. The Board is therefore satisfied that claim 1 meets the requirements of Article 123(2) EPC.

2. *Novelty*

- 2.1 As admitted by the respondent, novelty of claim 1 according to the main request and the auxiliary requests with respect to documents D1 and D2 is achieved by the feature that the symbols of one set have a different shape from the symbols of the other set, and novelty with respect to document D4 is achieved by the feature that the article and the security device can be crumpled.
- 2.2 Document D3 constitutes an article which carries a security device in the form of an authenticated item (photo covered by a security layer), the security device carrying a number of optically diffracting areas, wherein, under white light illumination, the optically diffracting areas generate a number of prominent, readily recognizable, individual symbols (letters "A", "B", "D", "F", "K", "N", "U") identifiable to the unassisted naked eye, there being at least two sets of at least three symbols (first set: letters "F", "U", "N" or "D" of each word "FUND"; second set: letters "B", "A", "N" or "K" of each word "BANK"), wherein all the symbols within a set are substantially identical, and are positioned in a non-overlapping, regular geometric arrangement, wherein the symbols of one set have a

different shape from the symbols of the other set, and wherein the appearance of the symbols varies due to the variation in diffractive performance of the diffracting areas on viewing the diffracting areas at different inclination viewing angles such that the angularly variable appearance of the symbols indicates that the item is authentic, and wherein the symbols within a set exhibit substantially the same optical appearance at at least one common viewing angle of inclination, and wherein the symbols of the two sets exhibit mutually opposed variations in optical performance as the viewing angle of inclination varies.

As demonstrated by the respondent during oral proceedings, the article according to document D3 and its security device can be crumpled, and the security device enables the article to be authenticated in the crumpled condition.

Thus, document D3 shows all features of the subject-matter of claim 1 according to the main request, which lacks novelty for this reason. The main request is therefore not allowable, Articles 100(a), 54 EPC.

2.3 The additional feature of claim 1 according to the first auxiliary request that each symbol of one set overlaps a symbol of the other set is not comprised in the article according to document D3. Rather, all symbols are spaced apart in that article.

Consequently, the subject-matter of claim 1 according to the first auxiliary request is novel with respect to document D3. Novelty of claim 1 according to the first auxiliary request was not disputed by the respondent.

2.4 Document D3 also shows the additional feature "wherein the symbols are perceptibly spaced apart" of claim 1 according to the second auxiliary request. Consequently, also the subject-matter of claim 1 according to the second auxiliary request lacks novelty. Thus, also the second auxiliary request is not allowable, Articles 100(a), 54 EPC.

3. *Inventive step*

3.1 As indicated under point 2.3 above, document D3, which is considered to represent the closest prior art, does not disclose the feature that each symbol of one set of symbols of the security device overlaps a symbol of the other set of symbols.

3.2 Document D4 discloses an article carrying a security device having two sets of symbols, each set consisting of two symbols (first set: two symbols "MC"; second set: two globe-symbols). Each symbol of one set overlaps a symbol of the other set (cf. the photos and their description on page 17 of document D4). Although document D4 describes a credit card where the security device is formed on rigid plastic material, the design of security devices of such cards may be transferred to non-rigid articles. The security device is a thin layer which can be applied to almost any substrate, thus also to a thin plastic card as used for document D3 which can be crumpled. Thus, if desired for further enhancing the security effect of the security device of document D3, a person skilled in the art will see no obstacle to use the overlapping design of the security device of document D4 also for the security device of document D3.

3.3 The subject-matter of claim 1 according to the first auxiliary request cannot therefore be considered to involve an inventive step. Thus, also the first auxiliary request is not allowable, Articles 100(a), 56 EPC.

## **Order**

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

The appeal is dismissed.

The Registrar:

The Chairman:

M. Dainese

W. Moser