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**Datasheet for the decision
of 11 September 2024**

Case Number: T 1224/21 - 3.2.05

Application Number: 10775854.2

Publication Number: 2493698

IPC: B42D15/00

Language of the proceedings: EN

Title of invention:

Security devices and methods of manufacturing them

Patent Proprietor:

De La Rue International Limited

Opponents:

Koenig & Bauer AG
CCL Secure Pty Ltd

Relevant legal provisions:

EPC Art. 54, 56, 100(a), 100(b), 100(c)
RPBA 2020 Art. 12(2), 12(4), 12(6)

Keyword:

Grounds for opposition - insufficiency of disclosure (no) -
subject-matter extends beyond content of earlier application
(no) - lack of novelty (no) - lack of inventive step (no)
Primary object of appeal proceedings to review decision -
appeal case directed to objections on which decision was based
(no) - new objections admitted (no)
Late-filed objection - should have been submitted in first-
instance proceedings (yes) - admitted (no)

Decisions cited:

T 1883/12



Beschwerdekammern

Boards of Appeal

Chambres de recours

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Case Number: T 1224/21 - 3.2.05

D E C I S I O N
of Technical Board of Appeal 3.2.05
of 11 September 2024

Appellant:
(Opponent 2)

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Decision under appeal:

**Decision of the Opposition Division of the
European Patent Office posted on 8 June 2021
rejecting the opposition filed against European
patent No. 2493698 pursuant to
Article 101(2) EPC**

Composition of the Board:

Chairman O. Randl
Members: M. Holz
 M. Blasi

Summary of Facts and Submissions

- I. Opponent 2 (appellant) appealed against the decision of the opposition division rejecting the oppositions of opponent 1 and opponent 2 against European patent No. 2 493 698 (the patent).

With its statement of grounds of appeal, the appellant filed products E2 and E31 (strips showing an optical effect), document E30 (relating to results of an online search for the term "cylindrical fresnel lens") and documents E32 to E35 (relating to an alleged public prior use of product E31).

- II. The patent proprietor (respondent) replied to the appellant's statement of grounds of appeal.

On 13 July 2023, summons to oral proceedings before the board scheduled for 5 September 2024 were issued, in line with the requests of the parties.

By letter dated 29 April 2024, the respondent filed further submissions, including the sets of claims of several auxiliary requests.

On 13 June 2024, the board issued a communication under Article 15(1) RPBA providing, *inter alia*, its preliminary opinion on various issues and indicating that the appeal was likely to be dismissed.

By letter dated 5 August 2024, the respondent filed further submissions.

By letter dated 28 August 2024, the appellant informed the board that it would not attend the oral proceeding before the board.

By communication of 30 August 2024, the parties were informed that the oral proceedings before the board had been cancelled.

Opponent 1 is party to the appeal proceedings as of right under Article 107, second sentence EPC. It has not filed any substantive submissions in the appeal proceedings.

III. The following documents submitted during the proceedings before the opposition division are cited in this decision.

- E1: US 2008/0309063 A1
- E2': eBay, "PEDIAMYCIN Antibiotic 1970's VARI-VUE Pharmaceutical Advertising Lenticular", last updated on 2 May 2019
- E2": "The Microstructure of Lenticular E2"
- E5: US 6,329,987 B1
- E6: US 5,924,870
- E7: US 2,799,938
- E8: US 4,417,784
- E10: US 2004/0195823 A1
- E11: I. Žiljak et al., "Flip Flop and Spatial (3D) Graphics in Lenticular Technique", 34th International Research Conference of Iarigai, Advances in Printing and Media Technology, Grenoble (FR), 9 to 12 September 2007
- E12: F. Didik, "Uses of Lenticular Technology", <http://www.didik.com/dlen.htm>, 1993

E18: US 2,815,310
E19: R.L. van Renesse, "Optical Document Security", 1st edn., 1994, pages 297 to 316
D25: WO 2010/115235 A1

The bibliographic data for document E19 are taken from page 7, penultimate paragraph of the appellant's letter dated 23 December 2020. Document E19 itself does not indicate the book from which the excerpt was taken, the edition or the publication year.

IV. Relevant requests to be decided upon:

The appellant requests that the decision under appeal be set aside and the patent be revoked. Furthermore, oral proceedings were requested. The appellant also requests that the allegations relating to the purchase of Pediamycin lenticular flickers and the associated documents filed in support thereof (documents E31 to E33) be admitted into the proceedings.

The respondent requests that the appeal be dismissed. As an auxiliary measure, oral proceedings were requested. The respondent further requests that:

- documents E2", E18 and E23 and the websites referred to in point 5.1. of the Reasons for the contested decision be disregarded or not be admitted
- product E31 and documents E30 and E32 to E35 not be admitted
- documents D25 and E19 be disregarded or not be admitted
- the objection of lack of inventive step in view of document E1 combined with document E10 not be admitted

- the objection of insufficiency relating to opaque image strips not be admitted

V. Claim 1 as granted reads (the feature identification used by the board is included in square brackets):

"[1] A security device having a lenticular device comprising [1.1] an array of lenticular focusing elements, formed by cylindrical lenses (2) or micromirrors, [1.2] located over a corresponding array of pairs of image strips (A,B) such that, [1.2.1] in a first viewing direction, a first image strip from each pair is viewed by respective ones of the lenticular focusing elements and, [1.2.2] in a second viewing direction, different from the first, a second image strip from each pair is viewed by respective ones of the lenticular focusing elements characterized in that [1.3] one of each pair of image strips has portions defining a first image, such as a symbol, character or graphic device, in a first colour and a second image in a second colour respectively, and [1.4] the other of each pair of image strips has portions defining the first image in the second colour and the second image in the first colour respectively, [1.5] whereby on tilting the device, a colour switch is observed between the first and second images."

Claim 5 as granted reads:

"[5] A security device having a lenticular device comprising [5.1] an array of lenticular focusing elements, formed by cylindrical lenses (2) or micromirrors, [5.2] located over a corresponding array of pairs of strips (A,B) such that, [5.2.1] in a first viewing direction, a first strip from each pair is viewed by respective ones of the lenticular focusing

elements and, [5.2.2] in a second viewing direction, different from the first, a second strip from each pair is viewed by respective ones of the lenticular focusing elements characterized in that [5.3] one of each pair of strips has one or more opaque, for example metallic, portions defining a first image, such as symbol, character or graphic device, and one or more transparent portions defining a second image or background respectively, and [5.4] the other of each pair of strips has one or more transparent portions defining the first image and one or more opaque portions defining the second image or background respectively, [5.5] whereby on tilting the device, a switch in appearance is observed between the first and second images or background."

Claim 13 as granted reads:

"[13] A method of manufacturing a security device, the method comprising [13.1] providing an array of lenticular focusing elements formed by cylindrical lenses (2) or micromirrors on one side of a transparent substrate; and [13.2] providing a corresponding array of pairs of image strips (A,B) on the other side of the transparent substrate, the image strips and lenticular focusing elements defining a lenticular device such that, [13.2.1] in a first viewing direction, a first image strip from each pair is viewed by respective ones of the lenticular focusing elements and, [13.2.2] in a second viewing direction, different from the first, a second image strip from each pair is viewed by respective ones of the lenticular focusing elements characterized in that [13.3] one of each pair of image strips has portions defining a first image, such as a symbol, character or graphic device, in a first colour and a second image in a second colour respectively, and

[13.4] the other of each pair of image strips has portions defining the first image in the second colour and the second image in the first colour respectively, [13.5] whereby on tilting the device, a colour switch is observed between the first and second images."

Claim 16 as granted reads:

"[16] A method of manufacturing a security device, the method comprising [16.1] providing an array of lenticular focusing elements formed by cylindrical lenses (2) or micromirrors on one side of a transparent substrate; and [16.2] providing a corresponding array of pairs of strips (A,B) on the other side of the transparent substrate, the strips and lenticular focusing elements defining a lenticular device such that, [16.2.1] in a first viewing direction, a first strip from each pair is viewed by respective ones of the lenticular focusing elements and, [16.2.2] in a second viewing direction, different from the first, a second strip from each pair is viewed by respective ones of the lenticular focusing elements characterized in that [16.3] one of each pair of strips has one or more opaque, for example metallic, portions defining a first image, such as a symbol, character or graphic device, and one or more transparent portions defining a second image or background respectively, and [16.4] the other of each pair of strips has one or more transparent portions defining the first image and one or more opaque portions defining the second image or background respectively, [16.5] whereby on tilting the device, a switch in appearance is observed between the first and second images or background."

Dependent claims 2, 3, 4, 6 to 12, 14, 15 and 17 to 20 as granted depend on one or more of independent claims 1, 5, 13 and 16 as granted.

VI. The parties submitted the following:

(a) Ground for opposition under Article 100(a) in conjunction with Article 54 EPC

(i) Appellant

Document D25 disclosed the subject-matter of claims 1, 5, 13 and 16 as granted. Features 1.1, 1.3, 1.5; 5.1, 5.3; 13.1, 13.3, 13.5; and 16.1, 16.3 were implicitly disclosed in document D25. An array of lenticular focusing elements, formed by cylindrical lenses (see features 1.1, 5.1, 13.1 and 16.1) was disclosed in view of page 7, lines 5 and 6 and the third paragraph; page 8, lines 8 and 9; page 11, lines 3 to 14, 23 and 24; page 12, lines 5 to 7; and Figure 5 of document D25. The skilled person understood the term "lenticular array" as an array of cylindrical lenses (see document E19, page 303, last paragraph). Page 11, lines 3 to 14, 23 and 24; page 12, lines 5 to 7; and Figure 5 of document D25 disclosed that the images were created as interlaced strips or lines in the ablative layer. It followed from these passages that the microlenses must be cylindrical. If the microlenses were spherical, the ablation through the mask would not result in ablated lines but rather a dot pattern. Figure 5 of document D25 showed the linear geometry of the lenticular device. Features 1.3, 1.5, 15.3 and 15.5 were disclosed in view of page 8, penultimate paragraph; the paragraph bridging pages 12 and 13; and Figures 3A and 3B of document D25. A different luminance implied a different colour. For example,

starting from light red, a change in luminance could result in dark red, which was a different colour than light red. Features 5.3 and 16.3 were disclosed in view of the strips of the reflective ablative layer (see areas 24) shown in white in Figures 3A and 3B of document D25. An opaque layer did not transmit any light. It followed from column 4, line 28 of the patent in suit that a reflective layer was opaque.

The subject-matter of claim 1 as granted was not new in view of a public prior use of product E2. Product E2 was a security device according to the definition of paragraph [0001] of the patent because it was suitable for use on articles of value such as a certificate of authenticity for the antibiotic product Pediamycin. Product E2 had an explicit reference to US patent No. 2 815 310 (see document E18). Thus, the skilled person understood that document E18 provided details on the production method and structure of product E2. Accordingly, the teaching of document E18 was disclosed in combination with product E2. Document E18 should have been admitted in the opposition proceedings due to its high *prima facie* relevance. Features 1.1 to 1.2.2 were disclosed in document E18 (see Figure 11 and column 4, lines 18 to 45).

The subject-matter of claim 1 as granted was not new in view of a public prior use of product E31. The public prior use of product E31 was evident in view of documents E32 to E35.

(ii) Respondent

Document D25 should not have been admitted by the opposition division as it had been late filed and was not *prima facie* relevant. A careful investigation of

the disclosure of document D25 and its priority document would have been required (see decision T 1883/12). Document D25 did not disclose the subject-matter of claims 1, 5, 13 and 16 as granted as it did not disclose features 1.1, 1.3, 1.5; 5.1, 5.3; 13.1, 13.3, 13.5; and 16.1, 16.3.

It was not proven that product E2 had been made publicly available before the relevant priority date. Product E2 did not disclose the subject-matter of the independent claims as granted. The skilled person did not consider product E2 to be a security device.

Product E31 should not be admitted in the appeal proceedings. It had not been made publicly available before the relevant priority date, and it did not disclose the subject-matter of the independent claims as granted. The statements and images on page 18 of the statement of grounds of appeal were insufficient evidence to establish that all the features of claims 1 and 13 as granted could be found in product E31.

(b) Ground for opposition under Article 100(a) in conjunction with Article 56 EPC

(i) Appellant

The subject-matter of claim 1 as granted did not involve an inventive step in view of a combination of documents E1 and E7. Document E1 did not disclose feature 1.4. The technical effect of feature 1.4 was only negative as it rendered the printing of the security device more complicated without providing any advantage. The technical problem of providing a simple but secure security device that was easy to verify was not solved over the entire range claimed. This could be

seen when considering the embodiment of Figure 26 of the patent. In this figure, a red star turned into a blue star at another position of the device and a blue numeral "5" turned into a red numeral "5" at another position of the device when tilting the device. Since the viewer had to check where the star and numeral moved, the verification of the security device was more complex, more elaborate and even less intuitive than the vanishing and appearing numeral "1" disclosed in document E1. The objective technical problem was at best how to provide an alternative security document. Document E7 disclosed a ruler incorporating a colour switch as specified in feature 1.4 and thus suggested the claimed solution. Documents E5 and E6 could also be considered the closest prior art. These documents did not disclose feature 1.4. The subject-matter of claim 1 as granted did not involve an inventive step in view of either document for the same reasons set out for document E1. Alternatively, document E8 could be considered the closest prior art. Document E8 did not disclose features 1.3 and 1.4. The objective technical problem was to provide a security device offering higher security. From document E11, page 2, second paragraph; document E12, section 6; product E2; and document E2', the person skilled in the art of security devices was familiar with lenticular devices and knew that providing them with alternating graphics would offer a higher level of security.

The subject-matter of claim 5 as granted did not involve an inventive step in view of a combination of document E1 and document E10 or E8. Features 5, 5.1, 5.2, 5.2.1 and 5.2.2 were the same as features 1, 1.1, 1.2, 1.2.1 and 1.2.2. Features 5.3 to 5.5 was distinguished from features 1.3 to 1.5 merely by one of the portions being transparent (claim 5) rather than

being in a first/second colour (claim 1). The other portion being in a colour implied that it was opaque. This modification was customary practice of the person skilled in the art of designing security devices (see, for example, document E10, paragraph [0093]). The subject-matter of claim 1 as granted did not involve an inventive step in view of the combination of product E2 and document E18.

Claims 13 and 16 as granted essentially corresponded to claims 1 and 5 as granted. The subject-matter of these claims was not inventive for the same reasons. The feature of providing the lenticular focusing elements on one side of a transparent substrate and the image strips on the other side of the transparent substrate was inherent to the cited prior art. Nor did the subject-matter of dependent claims 2 to 4, 6 to 12, 14, 15 and 17 to 20 as granted involve an inventive step.

(ii) Respondent

The subject-matter of claims 1 and 5 as granted involved an inventive step. Document E1 did not disclose feature 1.4. This feature provided a complementary inversion of the colours of two images such that the security device acted as its own reference for verification. The objective technical problem was how to provide a simple but secure verification device. Document E7 disclosed an evaluation device (for example, a ruler) that exhibited equivalent values on tilting. Document E7 did not concern a security device and was in a different technical field to both the contested patent and document E1. The skilled person would not have consulted document E7 when attempting to solve the objective technical problem. Documents E5 and E6

disclosed conventional lenticular devices. They were no closer to claim 1 as granted than document E1. Document E8 did not disclose features 1.3, 1.4 and 1.5. The objective technical problem was how to provide a security device providing higher security. Features 1.3, 1.4 and 1.5 were not disclosed or suggested by documents E11, E12 and E2' or product E2.

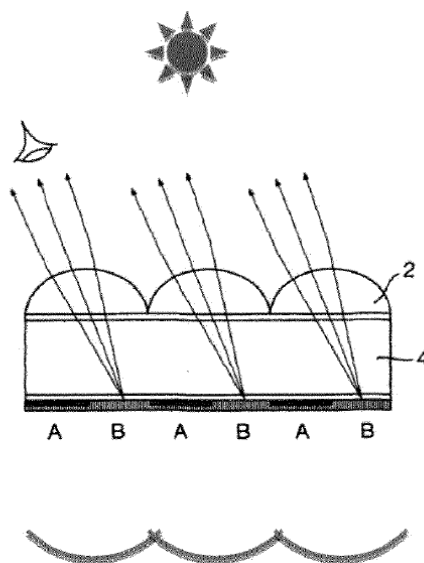
Regarding claim 5 as granted, also portions that were not opaque could be coloured. For example, a part could have a coloured "tint" while otherwise being essentially transparent. The objection of lack of inventive step in view of a combination of documents E1 and E10 had not been raised in the opposition proceedings and should not be admitted. Document E10 was not about a lenticular device. Paragraph [0093] of document E10 did not teach a contrast between opaque and transparent regions. Column 5, first paragraph of document E8 discussed mirrors of different reflectivity for juxtaposed elements A, B, C. There was no teaching of the use of opaque and transparent regions to exhibit the effect taught in claim 1 as granted.

The subject-matter of claims 13 and 16 as granted involved an inventive step for the reasons set out for claims 1 and 5 as granted.

(c) Ground for opposition under Article 100(b) EPC

(i) Appellant

Claim 1 as granted essentially claimed the following configuration (see page 26 of the statement of grounds of appeal):



It related to opaque (non-transmissive) image strips. However, the light from the light source (sun symbol above) could not propagate to the mirrors. Thus, it was impossible to achieve the claimed effect of a colour switch observed between the first and second images.

For the embodiment shown in Figure 25 of the patent, several parameters needed to be tuned to put this embodiment into practice. The patent provided no disclosure on these parameters. Thus, the invention was insufficiently disclosed.

(ii) Respondent

The objection based on the drawing on page 26 of the statement of grounds of appeal had not been raised in the opposition proceedings. It should not be admitted in the appeal proceedings. The patent provided, in Figure 25, an embodiment showing how micromirrors may be used to generate the claimed effect. Setting parameters did not represent an undue burden for the skilled person.

(d) Ground for opposition under Article 100(c) EPC

(i) Appellant

The subject-matter of claim 1 as granted extended beyond the content of the application as filed in view of the wording "formed by" (see feature 1.1). The opposition division had asserted that the term "formed by" could be allocated somewhere in the range between the originally disclosed terms "comprise" and "is". However, a generic disclosure of the range did not qualify as direct and unambiguous disclosure of species from the range. The same applied to independent claims 5, 13 and 16 and paragraphs [0009] to [0018] of the patent as granted.

(ii) Respondent

The opposition division was correct in its decision that the subject-matter of claim 1 as granted did not extend beyond the subject-matter of the application as filed. No new arguments on this had been presented by the appellant. This also applied to independent claims 5, 13 and 16 as granted.

Reasons for the Decision

1. Decision in written procedure

Pursuant to Article 15(3) RPBA, the board is not obliged to delay any step in the proceedings, including its decision, by reason only of the absence at the oral proceedings of a duly summoned party, which may then be treated as relying only on its written case.

In the current case, oral proceedings, requested by both the appellant and the respondent, had been scheduled. In reaction to the communication under Article 15(1) RPBA, in which the board had provided its preliminary opinion that the appeal was likely to be dismissed, the appellant informed the board that it would not attend the oral proceedings.

While under Article 116(1) EPC oral proceedings take place at the request of any party to the proceedings, due to the conditional nature of the respondent's request for oral proceedings, it was only the appellant's request for oral proceedings which became relevant for the board to consider as the board intended to take a decision adversely affecting the appellant. However, since the appellant had informed the board that it would not be attending the scheduled oral proceedings implying that it would not make use of the opportunity to present its case orally and to provide any further comments on the matter, the board saw itself in a position to cancel the oral proceedings and to decide the case without holding oral proceedings. There is no indication that Article 116(1) EPC would also encompass a right of the party having requested oral proceedings to have the appeal case decided on the date of the scheduled oral proceedings. It would have been permissible for the board to fix a new date for the oral proceedings, either *ex officio* or if duly requested by a party. Moreover, when holding the oral proceedings as scheduled in accordance with Rule 115(2) EPC, the board was not obliged to orally announce the decision before closing the oral proceedings (see Article 15(6) RPBA).

In light of the above considerations, the oral

proceedings were cancelled, and the decision is given in writing.

In the communication under Article 15(1) RPBA, the parties had been made aware of the board's intention to dismiss the appeal and the reasons for this. By deciding not to attend the oral proceedings, the appellant effectively chose not to avail itself of the opportunity to present its observations and counter-arguments orally but instead to rely on its written submissions. The reasoning in this decision is essentially the same as in the communication under Article 15(1) RPBA, hence the right to be heard enshrined in Article 113(1) EPC has been observed.

2. Ground for opposition under Article 100(a) in conjunction with Article 54 EPC

2.1 *Document D25*

2.1.1 The appellant filed document D25 with its letter dated 23 December 2020, submitting that it disclosed the subject-matter of claims 1, 5, 13 and 16 as granted. The opposition division considered this document *prima facie* relevant, decided to admit it in the opposition proceedings and considered its content (see points 5.3 and 7.2 of the Reasons for the decision under appeal).

The respondent requests that document D25 not be admitted as it was late filed and not *prima facie* relevant. A careful investigation of the disclosure of document D25 and its priority document would have been required prior to its admission (see decision T 1883/12).

It is not apparent how and on what legal basis document D25 could be disregarded or excluded from the appeal proceedings. An opposition division can even *ex officio* consider relevant facts in the proceedings before it (Article 114(1) EPC). Thus, document D25 forms part of the appeal proceedings.

Moreover, the opposition division's discretionary decision to admit document D25 did not suffer from an error. A board should only overrule the way in which a department of first instance has exercised its discretion when deciding on a case if it concludes that it has done so according to the wrong principles, without taking into account the right principles or in an unreasonable way and has thus exceeded the proper limits of its discretion (see also "Case Law of the Boards of Appeal of the European Patent Office", Tenth edn., July 2022 (Case Law), IV.C.4.5.2).

The opposition division, when deciding on admittance, applied the correct criterion, namely the *prima facie* relevance of this document. The respondent's view that the opposition division should have carried out a careful investigation of this document's disclosure and its priority document does not imply that the opposition division exceeded the proper limits of its discretion. The way in which the opposition division exercised its discretion is consistent with decision T 1883/12 cited by the respondent: "*[p]rima facie relevance is ascertained on the face of the facts, i.e. with little investigative effort, which reflects the need for procedural expediency in considering, and admitting late filed facts and evidence*" (see point 3.1.3 of the Reasons).

Having assessed the above novelty objection on its merits, the opposition division came to the conclusion that document D25 did not disclose the subject-matter of the independent claims as granted (see point 7.2 of the Reasons for the decision under appeal). This does not imply that it had exercised its discretion on the admittance of this document in an unreasonable way.

- 2.1.2 The opposition division concluded that the subject-matter of claims 1, 5, 13 and 16 as granted was new in view of document D25 (see point 7.2 of the Reasons for the decision under appeal). According to the opposition division, that document did not disclose cylindrical microlenses and features 1.3 and 13.3. Nor did it disclose that the reflective layer of the embodiment of Figure 3 was opaque. The respondent submits that document D25 did not disclose features 1.1, 1.3, 1.5; 5.1, 5.3; 13.1, 13.3, 13.5; and 16.1, 16.3. The appellant takes the view that these features were implicitly disclosed in document D25.

A prior-art document anticipates the claimed subject-matter if the latter is directly and unambiguously derivable from that document, including any features implicit to a person skilled in the art. However, an alleged disclosure can only be considered "implicit" if it is immediately apparent to the skilled person that nothing other than the alleged implicit feature forms part of the subject-matter disclosed (see also Case Law, I.C.4.3).

- 2.1.3 Regarding the array of lenticular focusing elements formed by cylindrical lenses (see features 1.1, 5.1, 13.1 and 16.1), the appellant refers to page 7, lines 5, 6 and third paragraph; page 8, lines 8 and 9;

page 11, lines 3 to 14, 23 and 24; page 12, lines 5 to 7; and Figure 5 of document D25.

However, it cannot be directly and unambiguously derived from the cited passages of document D25 that the microlenses in the embodiment shown in Figures 3A and 3B (to which the appellant refers for other claim features, see pages 7 and 8 of the statement of grounds of appeal) are formed by cylindrical lenses. Page 7, lines 5 and 6 and page 8, lines 8 and 9 of document D25 generally refer to "*an array of microlenses 4*". The third paragraph on page 7 of document D25 discloses that "*[t]he array of microlenses, which are also known as lenticular arrays, can include aspherical or asymmetrical microlenses or a suitable mixture of both*". These passages do not directly and unambiguously disclose that the microlenses are cylindrical. From document E19, page 303, last paragraph (cited by the appellant), it cannot be established that the skilled person understood based on common general knowledge that each and every "*lenticular array*" must necessarily be an array of cylindrical lenses or, for that matter, that no other shape of the microlenses 4 in document D25 was possible. Hence, document E19 is not pertinent to the issue in hand. As for the exclusion of document E19 from the appeal proceedings, requested by the respondent, the same considerations as for document D25 apply.

Page 11, lines 3 to 14, 23 and 24; page 12, lines 5 to 7; and Figure 5 of document D25 disclose that the images are created as interlaced strips or lines in the ablative layer. The appellant derives from these passages that the microlenses must be cylindrical. In its view, if the microlenses were spherical, the

ablation through the mask would not result in ablated lines but rather a dot pattern.

This view is not convincing. Lines or strips can be formed by dot patterns. It cannot therefore be concluded from the formation of interlacing lines in document D25 that the microlenses are cylindrical instead of spherical.

The appellant submits that Figure 5 of document D25 showed the linear geometry of the lenticular device. However, this figure does not show any microlenses but only the lines formed in the ablative layer (see page 6, lines 29 and 30 of document D25).

Features 1.1, 5.1, 13.1 and 16.1 are therefore not disclosed in document D25.

- 2.1.4 Regarding features 1.3, 1.5, 15.3 and 15.5, the appellant refers to page 8, penultimate paragraph; the paragraph bridging pages 12 and 13; and Figures 3A and 3B of document D25.

Features 1.3 and 15.3 refer to a first and second colour. In Figures 3A and 3B of document D25, however, the ablated areas do not reflect light (see page 8, penultimate paragraph of document D25). Only the transparent substrate and the microlenses are present in the ablated areas. The areas shown in black in Figures 3A and 3B are thus transparent, while the areas shown in white are reflective (see page 8, last paragraph of document D25). Hence, in the embodiment shown in these figures, features 1.3, 1.5, 15.3 and 15.5 are not disclosed.

The paragraph bridging pages 12 and 13 of document D25 concerns an alternative embodiment in which the ablative layer is printed over after creation of the images or patterns by laser light. This prevents viewing of the images or patterns from the reverse side of the security document. However, additional contrast is provided when viewing the images or patterns from the front side of the security document through the array of microlenses.

The opposition division took the view that the established meaning of "contrast" was a difference in luminance and/or colour. In its view, there was no indication in document D25 that a colour difference was selected among the possibilities to create a contrast. The appellant submits that a different luminance implied a different colour. For example, starting from light red, a change in luminance could result in dark red, which was a different colour than light red.

The skilled person commonly distinguishes between different colours (i.e. different wavelength(s)) and different intensities (for example, of the same colour). The paragraph bridging pages 12 and 13 of document D25 does not exclude the possibility that the additional contrast is provided by a print layer reflecting the same wavelength(s) as the ablative layer, but with a higher or lower intensity, or by diffusive reflection contrasted with specular reflection. In these cases, the reflected colour would be the same, while contrast is added due to the different intensity.

Features 1.3, 1.5, 15.3 and 15.3 are therefore not directly and unambiguously derivable from document D25, neither explicitly nor implicitly.

2.1.5 The appellant considers that features 5.3 and 16.3 were disclosed in view of the strips of the reflective ablative layer (see areas 24) shown in white in Figures 3A and 3B of document D25. The appellant refers to column 4, line 28 of the patent in suit and submits that a reflective layer was opaque.

The skilled person commonly understands that an opaque layer does not transmit any light, as also submitted by the appellant. All incident light is thus absorbed and/or reflected by an opaque layer. However, document D25 does not disclose that the ablative layer would not transmit light. It is not excluded in document D25 and furthermore appears technically possible that incident light is partially reflected by the ablative layer and partially passes through the ablative layer, such that the ablative layer is translucent.

In other passages (see, for example, page 9, line 27), document D25 discloses that the ablative layer can be reflective or opaque. However, the embodiment shown in Figures 3A and 3B cited by the appellant uses a reflective ablative layer.

Column 4, line 28 of the patent in suit is consistent with the above common understanding of the term "opaque". The skilled person understands from this passage that the image or the background can be opaque, typically opaque and reflective or opaque and metallic. That passage does not define that each and every reflective object is opaque.

Document D25 therefore does not disclose features 5.3 and 16.3.

2.1.6 The subject-matter of claims 1, 5, 13 and 16 as granted is thus new over document D25.

2.2 *Claim 1 - Alleged lack of novelty over the public prior use of product E2*

The appellant submits that the subject-matter of claim 1 as granted was not new in view of an alleged public prior use of product E2.

A novelty objection based on the product E2 was raised for the first time in the opposition proceedings in point 2 of the appellant's letter dated 23 December 2020. This letter was received on the final date for making written submissions in preparation for the oral proceedings fixed under Rule 116 EPC in the summons to oral proceedings before the opposition division. In the notice of opposition, the appellant had referred to an alleged public prior use of product E2 only for inventive step starting from one of documents E1, E5, E6 and E8 as the closest prior art (see page 7, fourth paragraph; page 9, fourth and fifth paragraphs; and page 11, first paragraph of the appellant's notice of opposition).

In accordance with Article 12(2) RPBA, in view of the primary object of the appeal proceedings to review the decision under appeal in a judicial manner, a party's appeal case must be directed to the requests, facts, objections, arguments and evidence on which the decision under appeal was based.

In the decision under appeal, the opposition division did not decide on the admittance of the above novelty objection or on its merits. This was not necessary

since the opposition division concluded that product E2 did not form part of the state of the art pursuant to Article 54(2) EPC (see point 4.1.3 of the Reasons for the decision under appeal). Consequently, the above novelty objection had to fail for this reason alone. The decision under appeal is, however, not based on the above novelty objection within the meaning of Article 12(2) RPBA.

In accordance with Article 12(4) RPBA, any part of a party's appeal case which does not meet the requirements in Article 12(2) RPBA is to be regarded as an amendment unless the party demonstrates that this part was admissibly raised and maintained in the proceedings leading to the decision under appeal. Any such amendment may be admitted only at the discretion of the board.

The appellant has not demonstrated that the above objection was admissibly raised and maintained in the proceedings leading to the decision under appeal. Its admittance was at the discretion of the opposition division. The appellant could therefore not have assumed that this objection would be admitted in the proceedings.

Consequently, the board has discretion over whether to admit the above novelty objection in the appeal proceedings. In accordance with Article 12(4) RPBA, the board exercises its discretion in view of, *inter alia*, the complexity of the amendment, the suitability of the amendment to address the issues which led to the decision under appeal and the need for procedural economy.

The examination of the aforementioned novelty objection on the merits would require, *inter alia*, that the board examine for the first time whether features 1 to 1.3 and 1.5 are disclosed by product E2. Moreover, it is not *prima facie* evident that the skilled person would have considered product E2 to be a security device according to feature 1. The appellant submits that product E2 was a security device according to the definition of paragraph [0001] of the patent because it was suitable for use on articles of value such as a certificate of authenticity for the antibiotic product Pediamycin. This view is not *prima facie* convincing as it is not evident that the skilled person would have considered any arbitrary product that is suitable for being attached to a certificate of authenticity to be a security device.

In addition, the appellant's submission on features 1.1 to 1.2.2 on pages 15 and 16 of the statement of grounds of appeal relies solely on passages of document E18. That document was examined by the opposition division only for its relevance to whether product E2 belongs to the state of the art (see point 4.1.2.1 of the Reasons for the decision). The opposition division did not admit document E18 in the opposition proceedings since, in its view, it was not suitable for proving the public availability of product E2 (see point 5.1 of the Reasons for the decision). The opposition division has, however, not assessed whether document E18 discloses features 1.1 to 1.2.2 of the claims as granted and, if so, whether it could be concluded that product E2 discloses these features too. The opposition division did not need to answer these questions since it took the view that product E2 did not belong to the state of the art under Article 54(2) EPC. If the above novelty objection was admitted in the appeal proceedings, the

above complex questions would need to be addressed for the first time in the appeal proceedings, and this would be detrimental to procedural economy. Moreover, the passages of document E18 cited by the appellant (in particular, Figure 11 and column 4, lines 18 to 45) relate to a specific embodiment. The appellant's assumption that these passages accurately describe features of product E2 is only based on the marking on the rear side of product E2. However, it is not *prima facie* derivable from the marking on product E2 that each and every feature of an embodiment disclosed in document E18 is implemented in product E2.

Exercising its discretion under Article 12(4) RPBA, the board therefore decides not to admit the above novelty objection in the appeal proceedings.

2.3 *Claim 1 and 13 - Alleged lack of novelty over the public prior use of product E31*

The appellant submits that the subject-matter of claim 1 as granted was not new in view of a public prior use of product E31. It is undisputed that this objection was raised for the first time in the statement of grounds of appeal and constitutes an amendment within the meaning of Article 12(4), first sentence RPBA.

The examination of this objection would require assessing, for the first time, whether product E31 belongs to the state of the art under Article 54(2) EPC (which is disputed by the respondent) by evaluating several pieces of evidence filed with the statement of grounds of appeal. Moreover, it is not *prima facie* evident that the skilled person would have considered

product E31 to be a security device as defined in feature 1 and that product E31 discloses all features of claim 1 as granted. In particular, it is not *prima facie* evident that the image provided at the bottom on page 18 of the statement of grounds of appeal shows cylindrical lenses as defined in feature 1.1. In view of the marking in the image, the darker and lighter regions in the image are apparently portions of the first and second images, such that it is questionable whether this image shows cylindrical lenses.

Exercising its discretion under Article 12(4) RPBA, the board therefore decides not to admit the above novelty objection in view of product E31 in the appeal proceedings.

2.4 Thus, the ground for opposition under Article 100(a) in conjunction with Article 54 EPC does not prejudice the maintenance of the patent.

3. Ground for opposition under Article 100(a) in conjunction with Article 56 EPC

3.1 *Claim 1 - Alleged lack of inventive step starting from document E1, E5 or E6 as the closest prior art*

3.1.1 The appellant considers that the subject-matter of claim 1 as granted does not involve an inventive step in view of a combination of documents E1 and E7 (see point II.7 of the statement of grounds of appeal). It is common ground between the parties that document E1 does not disclose feature 1.4. The appellant considers that the technical effect achieved in view of this feature was only negative as it rendered the printing of the security device more complicated without

providing any advantage. In its view, the objective technical problem was at best how to provide an alternative security document.

Feature 1.4 (in conjunction with feature 1.5) provides a complementary inversion of the colours of two images such that the security device acts as its own reference for verification. This results in a security feature that is easy to verify. This view is not altered by the appellant's reference to Figure 26 of the patent; the additional inversion of the position of the star and the numeral five shown in that figure provides an additional security feature that is easy to verify. The opposition division correctly concluded (see point 8.2.1 of the Reasons for the decision under appeal) that the objective technical problem is how to provide a simple but secure verification of a security device.

Document E7 is not concerned with security devices or their verification. The skilled person starting from document E1 would not have been prompted to consult document E7 in view of the objective technical problem. Moreover, even if prompted, the skilled person would not have found in document E7 any solution to the objective technical problem, let alone the claimed solution.

- 3.1.2 Regarding documents E5 and E6 as the closest prior art, the appellant submits that these documents did not disclose feature 1.4 and that the subject-matter of claim 1 as granted did not involve an inventive step in view of either document for the same reasons set out for document E1. As explained above, this line of argument is not convincing.

3.2 *Claim 1 - Alleged lack of inventive step starting from document E8 as the closest prior art*

The appellant submits that document E8 did not disclose features 1.3 and 1.4 and that the objective technical problem was to provide a security device offering higher security. According to the appellant, from documents E11, page 2, second paragraph; E12, section 6; product E2; and document E2', the person skilled in the art of security devices was familiar with lenticular devices and knew that providing the lenticular device with alternating graphics would offer a higher level of security.

In accordance with the "could-would approach" (see Case Law, I.D.5.), when considering whether claimed subject-matter constitutes an obvious solution to an objective technical problem, the question to be answered is whether the skilled person, in the expectation of solving the problem, would have modified the teaching in the closest prior-art document in light of other teachings in the prior art to arrive at the claimed invention. So the point is not whether the skilled person could have arrived at the invention by modifying the prior art, but rather whether, in expectation of the advantages actually achieved (i.e. in light of the technical problem addressed), the skilled person would have done so because of prompts in the prior art.

On page 2, second paragraph, document E11 discloses that "*[e]xperiments with lenticular images on security elements coming out from our laboratory have already been applied in practice and they proved to have extraordinary results*". However, document E11 does not address the above objective technical problem of providing a security device offering higher security.

Moreover, the cited passage does not suggest features 1.3 and 1.4 as a solution to the objective technical problem.

Section 6 of document E12 does not address security documents or the above objective technical problem. Nor does this passage provide a solution to the above objective technical problem.

Document E2' carries the date of 2 May 2019 and is not state of the art for the patent in suit. Irrespective of whether product E2 belongs to the state of the art, there is no reason why the skilled person would have been prompted to excise features of product E2 and implement them in the authenticating device of document E8. Even assuming that the skilled person could have done so, this does not imply that there was any prompt in the cited prior art to do so.

The respondent furthermore disputes that document E8 discloses feature 1.5. This point may be left open. For the above reasons, the skilled person was not prompted to incorporate feature 1.4 when starting from document E8 and facing the above objective technical problem. The subject-matter of claim 1 as granted therefore involves an inventive step in view of document E8 as the closest prior art for this reason alone.

3.3 *Claim 5 - Alleged lack of inventive step starting from document E1 as the closest prior art*

The appellant considers that the subject-matter of claim 5 as granted does not involve an inventive step in view of a combination of document E1 and document E10 or E8.

However, the appellant has neither identified the distinguishing features of claim 5 as granted over document E1 nor suggested a formulation of the objective technical problem or set out why the skilled person would have been prompted to incorporate the distinguishing features into the closest prior art.

The respondent submits that an objection of lack of inventive step in view of a combination of documents E1 and E10 against claim 5 as granted was not raised in the proceedings before the opposition division and that this objection should not be admitted.

However, the paragraph bridging pages 24 and 25 of the Reasons for the decision under appeal addresses this objection.

Yet, it cannot be established from the appellant's submission on page 24 of the statement of grounds of appeal why the opposition division's reasoning is believed to be incorrect. The features of the characterising portion of claim 5 are not disclosed or suggested by paragraph [0093] of document E10. Moreover, the appellant has not submitted why the skilled person would have been prompted to consult this passage of document E10 when starting from document E1.

No objection of lack of inventive step in view of a combination of documents E1 and E8 has been raised in the proceedings before the opposition division against claim 5 as granted, and the board therefore has discretion pursuant to Article 12(4) RPBA over whether to admit it. Since this objection is directed against claim 5 as granted, it could and should have been raised in opposition proceedings. Nor do the

circumstances of the appeal case justify the admittance of this objection. The board therefore decided not to admit this objection under Article 12(6), second sentence RPBA.

3.4 *Alleged lack of inventive step in view of a combination of product E2 and document E18*

The appellant raises an objection of lack of inventive step in view of a combination of the product E2 and document E18 against claim 1 as granted. This objection was not raised in the proceedings before the opposition division, and the board therefore has discretion pursuant to Article 12(4) RPBA as to whether to admit it. Since this objection is raised against claim 1 as granted, however, it could and should have been raised in opposition proceedings. No circumstances of the appeal case that justified the admittance of this objection in the appeal proceedings have been established. The board therefore decided not to admit this objection under Article 12(6), second sentence RPBA.

3.5 The subject-matter of claims 1 and 5 as granted involves an inventive step. The same applies *mutatis mutandis* to the subject-matter of claims 13 and 16 as granted directed at corresponding methods of manufacturing security devices. In this situation, the question of whether the feature relating to the lenticular focusing elements being provided on one side of a transparent substrate and the image strips on the other side of the transparent substrate (see features 13.1, 13.2, 16.1 and 16.2, which have no correspondence in claims 1 and 5 as granted) was disclosed or suggested by the available prior art may thus be left open.

Through their reference to one or more of independent claims 1, 5, 13 and 16, dependent claims 2 to 4, 6 to 12, 14, 15 and 17 to 20 as granted include all features of the independent claims. The subject-matter of the dependent claims therefore involves an inventive step at least for the reasons set out above.

The ground for opposition under Article 100(a) in conjunction with Article 56 EPC does not prejudice the maintenance of the patent.

4. Ground for opposition under Article 100(b) EPC

- 4.1 On page 26 of the statement of grounds of appeal, the appellant describes an arrangement in which micromirrors are located over an array of opaque image strips (see figure reproduced above) and concludes that it would have been impossible to achieve the claimed effect of a colour switch observed between the first and second images using such an arrangement. The respondent requests that this objection not be admitted under Article 12(6) RPBA.

The above objection was not raised in the opposition proceedings. Since it is directed against claim 1 as granted, the appellant could and should have raised it in the opposition proceedings. No circumstances of the appeal case that justified its admittance have been established. The board therefore decided not to admit this objection in the appeal proceedings under Article 12(6), second sentence RPBA.

- 4.2 With respect to the embodiment shown in Figure 25 of the patent, the appellant submits that several

parameters needed to be tuned to put this embodiment into practice. However, the mere fact that several parameters need be set does not give rise to serious doubts that the skilled person is able to put this embodiment into practice in view of common general knowledge.

4.3 The ground for opposition under Article 100(b) EPC therefore does not prejudice the maintenance of the patent.

5. Ground for opposition under Article 100(c) EPC

The appellant is of the opinion that the subject-matter of claim 1 as granted extended beyond the content of the application as filed in view of the wording "formed by" (see feature 1.1). In point 2 of the Reasons for the decision under appeal, the opposition division took the view that feature 1.1 defined either that the lenticular focusing elements were cylindrical lenses or micromirrors or that they comprised cylindrical lenses or micromirrors. According to point 2 of the Reasons for the decision, it had not been disputed by the appellant that both alternatives were disclosed in the application as filed. The opposition division concluded that the ground for opposition under Article 100(c) EPC did not prejudice the maintenance of the patent.

No fault is apparent in the opposition division's reasoning. It is undisputed that both interpretations of feature 1.1 set out by the opposition division are directly and unambiguously derivable from the application as filed on the basis of which the patent had been granted. It is not apparent from the appellant's submission what technical information the

skilled person would have derived from feature 1.1 which is not disclosed in the application as filed or what technical features the "generic disclosure of the range" (see point IV. of the statement of grounds of appeal) would encompass that went beyond the two alternative interpretations set out by the opposition division. The same applies in view of independent claims 5, 13 and 16 and paragraphs [0009] to [0018] of the patent as granted.

The ground for opposition under Article 100(c) EPC does not prejudice the maintenance of the patent.

6. Conclusion

Since none of the grounds for opposition raised by the appellant prejudices the maintenance of the patent, the appeal has to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



L. Stridde

O. Randl

Decision electronically authenticated