

Internal distribution code:

- (A) [-] Publication in OJ
- (B) [-] To Chairmen and Members
- (C) [-] To Chairmen
- (D) [X] No distribution

**Datasheet for the decision
of 13 December 2024**

Case Number: T 0516/22 - 3.2.05

Application Number: 16741114.9

Publication Number: 3319813

IPC: B42D25/45, B42D25/455,
B42D25/324, B42D25/46,
B42D25/342, G02B3/00,
B29D11/00, B42D25/425

Language of the proceedings: EN

Title of invention:

Security documents and security devices and method of their
manufacturing

Patent Proprietor:

De La Rue International Limited

Opponent:

Giesecke+Devrient Currency Technology GmbH

Relevant legal provisions:

EPC Art. 54, 56, 100(a)
RPBA 2020 Art. 12(3), 12(5), 12(6)

Keyword:

Novelty - main request (yes)

Inventive step - main request (yes)

Late-filed objection - should have been submitted in first-instance proceedings (yes) - admitted (no)

Discretion not to admit objections - requirements of Art. 12(3) RPBA 2020 met (no) - objections admitted (no)

Decisions cited:

T 0740/01, T 0131/03, T 1764/06



Beschwerdekammern
Boards of Appeal
Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 0516/22 - 3.2.05

D E C I S I O N
of Technical Board of Appeal 3.2.05
of 13 December 2024

Appellant: Giesecke+Devrient Currency Technology GmbH
(Opponent) Prinzregentenstraße 159
81677 München (DE)

Representative: Giesecke+Devrient IP
Prinzregentenstraße 161
81677 München (DE)

Respondent: De La Rue International Limited
(Patent Proprietor) De La Rue House
Jays Close
Viables
Basingstoke, Hampshire RG22 4BS (GB)

Representative: Gill Jennings & Every LLP
The Broadgate Tower
20 Primrose Street
London EC2A 2ES (GB)

Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 22 December
2021 rejecting the opposition filed against
European patent No. 3319813 pursuant to Article
101(2) EPC.**

Composition of the Board:

Chairman P. Lanz
Members: M. Holz
P. Guntz

Summary of Facts and Submissions

- I. The opponent (appellant) filed an appeal against the opposition division's decision rejecting the opposition against European patent No. 3 319 813 (the patent).
- II. The patent proprietor (respondent) filed a reply to the appeal.

By letter dated 31 January 2023, the appellant filed submissions in response to the respondent's reply.

The parties were summoned to oral proceedings before the board to be held on 11 June 2024.

The board issued a communication under Article 15(1) RPBA, providing its preliminary opinion that the appeal was likely to be dismissed.

By letter dated 28 May 2024, the appellant filed submissions in response to the communication under Article 15(1) RPBA and announced that it would not attend the oral proceedings before the board.

The oral proceedings before the board were subsequently cancelled.

- III. The following documents submitted during the opposition proceedings are cited in this decision:

D1: EP 1 879 154 A2
D2: WO 2015/154866 A1
D3: WO 2010/046125 A2

D4: WO 2011/116425 A1
D5: US 5,330,799
D6: US 2004/0219302 A1
D10: WO 2014/177267 A1
D11: US 2011/0019283 A1
D12: WO 2006/125224 A2
D13: Paolo Nanetti, "Coatings from A to Z - A concise compilation of technical terms", Vincentz Network, Hannover, 2006, pages 137 and 138.

With its statement of grounds of appeal, the appellant submitted the following document:

D15: Universal Selector, "UCAR™ VMCH Solution Vinyl Resin - Technical DataSheet", <http://coatings.specialchem.com>, 7 January 2022.

By letter dated 31 January 2023, the appellant submitted the following document:

D15A: The Dow Chemical Company, "UCAR™ VMCH - Solution Vinyl Resin", March 2006.

IV. The appellant requested that the decision under appeal be set aside and the patent be revoked. As an auxiliary measure, oral proceedings were requested.

The respondent requested that the appeal be dismissed (main request). As an auxiliary measure, oral proceedings were requested. As a further auxiliary measure, it was requested that the decision under appeal be set aside and the case be remitted to the opposition division for further prosecution or the patent be maintained as amended according to the claim

set and description of one of auxiliary requests 1 to 11, the claim set of auxiliary request 12, the claim set and description of auxiliary request 13, the claim set of auxiliary request 14, or the claim set and description of auxiliary request 15, 16 or 17, all filed with the reply.

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

"**[1.1]** *A method of making a security device, comprising:*

[1.2] *(a) forming an array (20) of focussing elements on a first region (202) of a first surface of a focussing element support layer (201), by:*

[1.3] *(a) (i') applying a pedestal layer (249) comprising at least one transparent material (207) onto at least the first region (202) of the first surface of the focussing element support layer (201);*

[1.4] *(a) (i) applying at least one transparent curable material (205) either to the pedestal layer (249) or to a casting tool (220) carrying a surface relief (225) corresponding to the focussing elements (20), over at least the first region;*

[1.5] *(a) (ii) forming the transparent curable material(s) (205) with the casting tool by bringing the first surface of the focussing element support layer (201) against the casting tool (220) such that the at least one transparent curable material (205) is between the surface relief (225) and the pedestal layer (249), across at least the first region; and*

[1.6] *(a) (iii) curing the transparent curable material(s) (205) on the pedestal layer (249) so as to retain the surface relief in the first region;*

[1.7] *wherein the focal length of the focussing elements (20) is such that their focal plane lies*

either substantially on the first surface of the focussing element support layer, or beyond the first surface of the focussing element support layer (201) relative to the location of the array of focussing elements (20), and wherein:

[1.8'] *the at least one transparent material (207) forming the pedestal layer (249) is more flexible than the at least one transparent curable material (205) applied in step (a)(i) once fully cured; and/or*

[1.8''] *the at least one transparent material (207) forming the pedestal layer (249) comprises at least two transparent materials (207a, 207b) having different optical detection characteristics, the at least two transparent materials (207a, 207b) being applied to different respective laterally offset sub-regions (208a, 208b) of the focussing element support layer (201) in the first region; and/or*

[1.8'''] *the pedestal layer (249) has a first height in a first sub-region (208a) of the first region and a second different height in a second sub-region (208b) of the first region."*

Claim 8 as granted reads:

[8.1] *A security device, comprising* **[8.2]** *an array of focussing elements (20) formed of at least one curable transparent material (205) disposed across a first region of a focussing element support layer (201) on a first surface thereof, and further comprising* **[8.3]** *a pedestal layer (249) comprising at least one transparent material (207) between the at least one curable transparent material (205) forming the array of focussing elements (20) and the first surface of the focussing element support layer (201),* **[8.4]** *wherein the focal length of the focussing elements (20) is such that their focal plane lies either substantially on the*

first surface of the focussing element support layer (201), or beyond the first surface of the focussing element support layer (201) relative to the location of the array of focussing elements (20), and wherein:

[8.5'] *the at least one transparent material (207) forming the pedestal layer (249) is more flexible than the at least one transparent curable material (205) forming the array of focussing elements (20) once fully cured; and/or*

[8.5''] *the at least one transparent material (207) forming the pedestal layer (249) comprises at least two transparent materials (207a, 207b) having different optical detection characteristics, the at least two transparent materials being located in different respective laterally offset sub-regions of the focussing element support layer (201) in the first region; and/or*

[8.5'''] *the pedestal layer (249) has a first height in a first sub-region of the first region and a second different height in a second sub-region of the first region."*

Claim 15 as granted reads:

[15.1] *A security document, comprising*

[15.2] *a polymer substrate (2) having first and second surfaces;*

[15.3] *an array of focussing elements (20) formed of at least one curable transparent material (205) disposed across a first region of a focussing element support layer (201) on a first surface thereof, and further comprising **[15.4]** a pedestal layer (249) comprising at least one transparent material (207) between the at least one curable transparent material (205) forming the array of focussing elements (20) and the first*

surface of the focussing element support layer (201), wherein [15.5] the focal length of the focussing elements is such that their focal plane lies either substantially on the first surface of the focussing element support layer, or beyond the first surface of the focussing element support layer relative to the location of the array of focussing elements, wherein [15.6] the focussing element support layer (201) is either the polymer substrate (2) or another layer applied thereto; and

[15.7] at least one opacifying layer (3) applied to the first and/or second surface of the polymer substrate (2), the or each opacifying layer comprising a non-transparent material, wherein [15.8] at least the opacifying layer(s) on the first surface of the substrate define a gap forming a window region in which at least part of the array of focussing elements is disposed, and wherein:

[15.9'] the at least one transparent material (207) forming the pedestal layer (249) is more flexible than the at least one transparent curable material (205) forming the array of focussing elements once fully cured; and/or

[15.9''] the at least one transparent material (207) forming the pedestal layer (249) comprises at least two transparent materials (207a, 207b) having different optical detection characteristics, the at least two transparent materials being located in different respective laterally offset sub-regions of the focussing element support layer in the first region; and/or

[15.9'''] the pedestal layer (249) has a first height in a first sub-region of the first region and a second different height in a second sub-region of the first region."

VI. The parties submitted the following.

(a) *Patent as granted - Ground for opposition under Article 100(a) in conjunction with Article 54 EPC*

(i) *Appellant*

The subject-matter of claims 1 and 8 as granted was not new over document D1. Feature 1.8' was disclosed in view of Example 1 shown in Figure 1 of document D1, specifically in view of UCAR™ VMCH (mentioned in paragraph [0059] of document D1) and documents D15 and D15A. This was not a new objection. Various passages of document D1 had been cited in the notice of opposition and the appellant's letter dated 17 September 2021. Two-layer systems had also been addressed. The appellant's appeal case had not been amended.

Since the priority claim was not valid in view of all alternatives of claims 1, 8 and 15 as granted, document D2 belonged to the state of the art under Article 54(2) EPC for all alternatives of these claims. The subject-matter of the first alternative of claims 1 and 8 as granted (including features 1.8' and 8.5', respectively) was not new in view of Example 1 document D2. Regarding feature 1.8', the term "flexible" was not clear. The patent did not include a method for measuring the flexibility of the materials used, nor did it specify which measurable parameter (or which mechanical property) was meant by this term (for example, modulus of elasticity, flexural strength, etc.). It was possible to imagine situations in which certain materials achieved the same value in one of these measurable parameters but not in the other. No specific values for the flexibility were stated in the patent. Feature 1.8' therefore had no limiting effect.

Since the flexibility of a material was an unusual parameter, the burden of proof for the disclosure of feature 1.8' in the prior art shifted to the respondent in view of T 131/03, T 740/01 and "Case Law of the Boards of Appeal of the European Patent Office", Tenth Edition, July 2022 (Case Law), I.C.5.2.3 and III.G. 5.2.2.d). Even if this view was not accepted, for the purpose of examining novelty and inventive step, all technically reasonable possible interpretations of the expression "more flexible" must be taken into account. Altering the flexibility of a material by cross-linking was one alternative (see paragraphs [0090] and [0091] of the patent). In Example 1 of document D2, the composition of layer 1 contained TPGDA (tripropylene glycol diacrylate) in a proportion of 10% by weight, while TPGDA was present in the composition of layer 2 in a significantly higher proportion of 40% by weight. It could therefore be assumed that the (cured) layer 1 had a lower concentration of cross-linking sites than the (cured) layer 2. Adding TPGDA, which caused higher cross-linking, in different proportions to the two layers would otherwise make no technical sense. There was therefore a strong presumption that feature 1.8' was met. The burden of proof for this feature thus shifted to the respondent. Unlike layer 2, the composition of layer 1 did not contain a multifunctional urethane acrylate but only a difunctional acrylate in a proportion of 40% by weight. With regard to multifunctional compounds, document D2 taught that strong cross-linking was thus achieved (see page 25, lines 1 to 4). According to paragraph [0091] of the patent, oligomers with higher functionality, such as multifunctional urethane acrylates, should lead to harder formulations. Paragraphs [0023] and [0090] of the patent implied that changing the thickness of a material had an effect on the flexibility of the

material. It followed from paragraphs [0111] and [0113] of the patent that the transparent curable material forming the lenses may be the same material as the transparent material forming the pedestal layer. Document D2 also disclosed that layers 1 and 2 could be made of the same material and that layer 1 was applied with a lower coating weight or in a thinner layer thickness than layer 2. As a result, the thinner layer 1 exhibited greater flexibility than layer 2, which was applied with a higher coating weight.

The first alternative of claim 8 (including feature 8.5') was not new in view of the embodiment shown in Figures 10a and 10b of document D3. In this embodiment, feature 8.5' was disclosed since only the layer 4, 21 was compressed or deformed under mechanical pressure and the microlenses 19a were not. Consequently, the distance between the microlens arrangement 19 and the microimage arrangement 20 was reduced. Throughout document D3, the compressible, elastically deformable area was indicated by the reference sign "4". See also Figure 16 in which the material forming the arrangement of focusing elements was elastically deformable. Consequently, in document D3, only the correspondingly marked layers were made of a compressible, elastically deformable material. Since the microlenses 19a in Figures 10a and 10b of document D3 did not carry the reference numeral 4, it could be concluded that they were not made of a compressible, elastically deformable material.

Document D4 disclosed the first alternative of claims 1, 8 and 15 as granted (including feature 1.8', 8.5' and 15.9', respectively). Feature 1.8' was implicitly disclosed in document D4, which set out that

the transparent ink (used to create the lenses) comprised a UV-curable embossable lacquer or an acrylic-based coating or a coating based on other components such as nitrocellulose, which were not elastomeric. According to paragraphs [0111] to [0113] of the patent, acrylic-based or nitrocellulose-based coating could be used for the curable material 205. Document D4 furthermore disclosed that the primer layer was formed of polyurethane which was elastomeric (as disclosed on pages 137 and 138 of document D13). The primer layer was more flexible than the transparent ink since it was thinner.

The first alternative of claims 1 and 8 (including feature 1.8' and 8.5', respectively) was not new in view of document D5. The polymer resin 20 used to form the lenses in document D5 could be an acrylic-based resin such as an acrylated urethane polyester oligomer (see document D5, column 14, lines 46 to 56). According to paragraph [0091] of the patent, such a resin formed a hard, brittle material. In contrast, the binder coating 13 was disclosed in document D5 as being a polymethyl acrylic such that it must implicitly be flexible.

The embodiment shown in Figure 9 of document D10 disclosed all features of the second alternative of claim 8 as granted (including feature 8.5''). Features 8.2 and 8.5'' were disclosed in view of page 27, lines 15 to 26 of document D10. A combination of features relating to the layer 102 disclosed in the context of the embodiments of Figures 8 and 9 was suggested by page 28, lines 1, 2 and 17 to 19 of document D10. The patent disclosed that transparent materials may be optically detectable. Consequently, laser-absorption layers had to be considered

transparent layers. The combination of the mask layer 102 and the material filling the gap region 34 in Figure 9 of document D10 constituted a pedestal layer.

The subject-matter of the first alternative of claim 8 (including feature 8.5') was disclosed in document D11. According to paragraphs [0072] and [0073] of that document, the focusing element layer 14 was formed as a rigid cross-linkable thermosetting layer, while the optical spacer 18 (18a, 18b) was a flexible thermoplastic layer. Consequently, the material of the optical spacer 18 was more flexible than the material of the focusing element layer 14.

The subject-matter of the third alternative of claim 8 (including feature 8.5''') was disclosed by the embodiment shown in Figure 10 of document D12. In a first line of argument, the lens support mesa 144 shown in Figure 10 of document D12 could be considered a pedestal layer within the meaning of claim 8 as granted. A layer thickness equal to zero was within the ambit of claim 8 as granted. This view was supported by paragraph [0018] of the patent in which a non-negligible thickness of at least 1 μm was only mentioned as a preferred option (see also paragraph [0019] of the patent). In a second line of argument, the combination of the lens support mesa 144 and the optical separation 150 could be considered a pedestal layer, and the icon separator 154 a focusing element support layer as defined in claim 8 as granted. In view of paragraph [0038] and Figure 12(c) of the patent, the patent did not define the focusing element support layer as a support layer.

(ii) *Respondent*

The subject-matter of claim 1 as granted was new over document D1, which did not disclose features 1.7 and 1.8'. The subject-matter of claim 8 as granted was new over document D1 for the same reasons. No objection of lack of novelty had been raised in the opposition proceedings in view of Example 1 of document D1.

The priority claim was valid in view of the first alternative of claims 1 and 8 as granted. Document D2 thus belonged to the state of the art under Article 54(3) EPC in view of these claim alternatives. The subject-matter of claim 1 as granted was new over document D2, which did not disclose, *inter alia*, feature 1.8'. The meaning of the term "flexible" was well known to the skilled person. There was no need to supply the reader with a particular measurement method since what was claimed was a relative difference in flexibility between two materials. The skilled person would have no difficulty in testing a sample of each material (using the same test in each case) to determine their relative flexibilities. The skilled person would not ignore the "more flexible" feature and see it as non-limiting. This was even more so in view of the function of the more flexible pedestal layer and the technical benefits it achieved. These were explained in paragraphs [0015] and [0090] to [0094] of the patent. The wording in the claims explicitly required that it was the material forming each respective layer which possessed the different relative flexibility. The pedestal layer and the array of focusing elements could thus not be formed of the same material as one another. Paragraph [0113] of the patent mentioned that the focusing elements may be formed from a flexible material too. This did not conflict with the

above since that paragraph did not disclose the pedestal layer and the focusing elements in the same device being formed from the same flexible material. Paragraph [0023] of the patent did not refer to feature 1.8' but to a different feature that may additionally be provided. Reducing the thickness of a layer could increase its flexibility. However, this was not what features 1.8', 8.5' and 15.9' required since their wording explicitly referred to the intrinsic properties of the two materials themselves. There was no disclosure in document D2 that one of the layers 1 and 2 was more flexible than the other. Feature 1.8' required the materials forming the two respective layers themselves to have intrinsically different flexibilities. Their thickness was not relevant in this regard. It was purely speculative that the layer 2 was less flexible than the layer 1 merely because of the different proportion of TPGDA. The subject-matter of claim 8 as granted was new over document D2 for the same reasons.

The subject-matter of claim 8 as granted was new in view of document D3. This document did not disclose, *inter alia*, feature 8.5'. While document D3 contrasted the flexibility of the compressible layer 4, 21 with the rigid layers 17, there was no comparison provided in the embodiment shown in Figure 10 between the material forming the compressible layer 4, 21 and the material forming the lenses 19.

Document D4 did not disclose feature 1.8' such that the subject-matter of claim 1 as granted was new over this document. For the same reasons, this also applied to claims 8 and 15 as granted. The appellant had not submitted any evidence for its allegation that the acrylic-based or nitrocellulose-based coating disclosed

in document D4 was necessarily less flexible than the polyurethane used in the primer disclosed in document D4. Polyurethane as well as acrylic-based and nitrocellulose-based coatings were classes of compounds in which each compound of these classes may have different properties.

The first alternative of claims 1 and 8 was new in view of document D5, which did not disclose, *inter alia*, feature 1.8'. In that document, the primer layer 13 was disclosed in column 8, lines 8 to 10 as being formed of polymethyl acrylic, while exemplary materials from which the lens array may be formed were disclosed in column 14, lines 47 onward. Polymethyl acrylic was a common resin used to form optical elements such as lenses. There was no reason to expect it to be flexible. There was also no reason to believe that any of the materials mentioned in column 14 of document D5 would be less flexible.

The second alternative of claim 8 as granted was new over the embodiment shown in Figure 9 of document D10. The mask layer 102 in that embodiment did not meet the specification of the pedestal layer in feature 8.5''. In all embodiments of document D10, including that of Figure 9, the mask layer was formed by a single material. That material was not transparent. For example, in Figure 9, the mask layer was a thin white opaque layer. Page 27, lines 15 to 18 of document D10 related to a different layer in a completely different embodiment, namely "laser-absorbing layer" 92 in the embodiment of Figure 8. This was not applicable to the mask layer 102 in Figure 9.

The subject-matter of the first alternative of claim 8 was new over document D11, which did not disclose,

inter alia, feature 8.5'. In that document, there was no disclosure of the material forming the layer 18a being more flexible than the material from which the lenses 14 were formed. Document D11 mentioned forming the optical spacer layer 18a from one of various thermoplastic materials (see paragraph [0058]) while forming the microlens array 14 and/or the icon layer 16 from one of various radiation-curable materials (see paragraph [0061]). However, this by itself did not inevitably mean that the material forming optical spacer layer 18a would be more flexible than the material forming lenses 14. The mechanical properties of the radiation-cured material depended significantly on the degree of cross-linking achieved during cure. If the material was only partially cross-linked, it may well have a significant degree of flexibility. Document D11 itself made use of this by allowing for the "stiffness, bond strength or crosslink density of the focusing element layer 14" to be "increased or decreased" depending on at which interface the delamination was to take place upon peeling (see paragraphs [0069] to [0071]). In paragraph [0072] of document D11, it was clear that the term "increased" was relative to the previous state of the focusing element and icon layers 14, 16 and was not relative to optical spacer layer 18a.

The subject-matter of the third alternative of claim 8 was not disclosed by the embodiment of Figure 10 of document D12. The lens support mesa 144 shown in Figure 10 of document D12 could not be considered a pedestal layer within the meaning of claim 8 as granted. The lens support mesa 144 was not a separate layer from the lens 140 formed on its top. In contrast, claim 8 as granted required the provision of the focusing element array and the pedestal layer as

distinct components. Feature 8.5''' required the pedestal layer to have a first height in a first sub-region and a second height in a second sub-region. This meant that the pedestal layer must be present in both sub-regions but with different heights. This was not the case in document D12. There was no support in paragraph [0018] of the patent that a height equal to zero was encompassed by claim 8. It was also clear that the spacer 150 in document D12 was the only layer which could be considered to constitute the claimed focusing element support layer. This was evidently the thickest layer of the construction and therefore provided the structural support. The lenses 140, 148 were applied to spacer 150. The patent defined the focusing element support layer as the support layer on which the lenses were formed (see paragraph [0037]). The skilled person would therefore correlate this to spacer 150 in Figure 10 of document D12. There was nothing in document D12 to suggest icon layer spacer 154 could act as a support layer

(b) *Patent as granted - Ground for opposition under Article 100(a) in conjunction with Article 56 EPC*

(i) *Appellant*

The subject-matter of the first alternative of claims 1 and 8 as granted (including features 1.8' and 8.5', respectively) did not involve an inventive step in view of Example 2 (i.e. the embodiment shown in Figure 2) of document D1. The latter did not shown feature 1.7. The substrate 10 in Figure 2 of document D1 was a focusing element support layer as defined in the claims. Paragraphs [0006] and [0035] and claims 1 and 10 of document D1 disclosed that a microstructure, in particular a structure with a microlens effect, could

be embossed into the outer layer. The layer 3 shown in Figure 2 of document D1 was provided with microlenses. The objective technical problem was to suggest an alternative method of making a security device with a focusing element array cooperating with an image element array. It could be derived from paragraphs [0004] and [0006] of the patent that the focal plane of typical security elements was substantially on the surface of a support (adjacent to the spacer) or on or outside the second surface of the spacer layer serving as a support. This was also the case for the security elements discussed in document D1. To provide the desired microlens effect (see paragraph [0006] of document D1), the focal plane of the microlenses of such a security element had to be located on the first surface of the substrate (which was the focusing element support layer) or at any point beyond the first surface of the substrate. The skilled person would have considered using the layer 3 provided with a microlens structure as the surface of a security element not to be applied but instead provided in the form of a security strip embedded in a security paper (see document D1, paragraph [0044] and claim 12).

The subject-matter of the first alternative of claims 1 and 8 (including features 1.8' and 8.5') as granted did not involve an inventive step in view of a combination of document D6 and the common general knowledge or document D1 or D2. Document D6 did not disclose feature 1.8'. Claim 1 as granted did not exclude the possibility that the material of the pedestal layer was hard, rigid and brittle. The number of materials and material thicknesses covered by the claim was such that it was inherently unlikely that all the claimed materials (or at least substantially all of them) would have a buffering/attenuation function. The formulation

of the objective technical problem suggested by the respondent of how to reduce damage to the focusing elements during handling was not solved across the entire ambit of the claim and was therefore incorrect. The objective technical problem could be seen instead as providing an alternative method for making security devices with focusing elements. In view of this objective technical problem, the skilled person would have consulted document D1 or D2 and thus have arrived at the claimed solution in an obvious manner.

The subject-matter of claims 1, 8 and 15 as granted did not involve an inventive step in view of any of documents D1, D2, D4, D5, D10, D11 and D12. A detailed discussion of inventive-step activity could not be presented with the statement of grounds of appeal since this would require that there was at least one distinguishing feature between the claimed subject-matter and the content of document D1 (see "Case Law of the Boards of Appeal of the European Patent Office", Ninth Edition, July 2019 (Case Law 2019), IV.C.3.4.2, second paragraph).

(ii) *Respondent*

The subject-matter of the first alternative of claims 1 and 8 as granted involved an inventive step in view of Example 2 of document D1, which did not disclose, *inter alia*, feature 1.7. The formulation of the objective technical problem suggested by the appellant was not correct. It contained a clear pointer to the current invention. Document D1 did not mention any image array or cooperation between it and a focusing element array. Any mention in document D1 of forming microlenses was not disclosed in combination with Example 2. In Example 2, the device takes the form of a transfer

element, i.e. the embossed structure was ultimately transferred off the carrier 10, onto the final document substrate (not shown in document D1). The carrier 10 did not form part of the security device itself but would be discarded. In the final product, the "flexible" layer would be located above the embossed layer, not between the embossed layer and the substrate on which it was carried. It would not have been obvious to change the Example 2 transfer element of document D1 into some other form of security device such as a strip. Even if such a change were adopted, the skilled person would not necessarily have retained the layer sequence described in Example 2.

The subject-matter of the first alternative of claims 1 and 8 as granted involved an inventive step in view of a combination of document D6 and the common general knowledge or document D1 or D2. Document D6 did not disclose features 1.1 and 1.8' and was not an appropriate starting point for the examination of inventive step. The objective technical problem solved was how to reduce damage to the focusing elements during handling. The skilled person would not have consulted document D1 or D2 in view of the objective technical problem and would not have found any solution to this problem in these documents.

The objections of lack of inventive step raised by the appellant against claims 1, 8 and 15 as granted in view of other documents as the closest prior art had not been substantiated with reasoned arguments.

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, both parties had requested oral proceedings as an auxiliary measure. In response to a communication under Article 15(1) RPBA, in which the board provided its preliminary opinion that the appeal was likely to be dismissed, the appellant filed further submissions and announced that it would not attend the oral proceedings before the board. The oral proceedings were subsequently cancelled.

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.

2. **Patent as granted - Ground for opposition under Article 100(a) in conjunction with Article 54 EPC**

2.1 *Novelty in view of document D1*

The appellant submits that feature 1.8' was disclosed by Example 1 shown in Figure 1 of document D1, specifically referring to UCAR™ VMCH (mentioned in paragraph [0059] of document D1) and documents D15 and D15A. The respondent takes the view that no objection of lack of novelty had been raised in the opposition proceedings in view of Example 1 of document D1. The appellant submits that various passages of document D1 had been cited in the notice of opposition and the appellant's letter dated 17 September 2021 and that also two-layer systems had been addressed. In the appellant's view, its appeal case had not been amended.

In accordance with Article 12(6), second sentence, RPBA, the board does not admit requests, facts, objections or evidence which should have been submitted, or which were no longer maintained, in the proceedings leading to the decision under appeal, unless the circumstances of the appeal case justify their admittance.

No objection of lack of novelty had been raised in the opposition proceedings against the first alternative of claims 1 and 8 as granted in view of Example 1 of document D1. Moreover, factual allegations concerning UCAR™ VMCH and its material properties had not been discussed in the opposition proceedings. The above objection has instead been raised for the first time in the appellant's statement of grounds of appeal. Since this objection is directed against granted claims, it could and should have been raised in the opposition

proceedings. Circumstances of the appeal case that would justify the admittance of this objection have not been set out by the appellant, nor are such circumstances apparent. The board therefore exercised its discretion under Article 12(6) RPBA and decided not to admit the novelty objection against the first alternative of claims 1 and 8 in view of Example 1 of document D1 into the appeal proceedings.

2.2 *Novelty in view of document D2*

The appellant submits that the subject-matter of the first alternative of claims 1 and 8 as granted was not new in view of Example 1 of document D2.

It is common ground between the parties that document D2 belongs to the prior art for these claim alternatives. The board shares this view. The parties are, however, at odds over whether the priority right for these claim alternatives is validly claimed and whether, accordingly, document D2 belongs to the state of the art under Article 54(2) or (3) EPC. However, in either case, document D2 would have to be considered state of the art for novelty. The validity of the priority claim therefore does not have a bearing on the discussion of novelty (for the assessment of inventive step, see points 3.2 and 3.3 below).

Regarding feature 1.8', the appellant submits that the term "flexible" had no limiting effect and, since this was an unusual parameter, the burden of proof for the disclosure of this feature in the prior art had shifted to the respondent.

However, the appellant has not convincingly demonstrated that the flexibility of a material was an

unusual parameter in the relevant technical field. Even assuming that the skilled person understood the term "flexible" as referring, for example, to the modulus of elasticity or flexural strength (as suggested by the appellant), this merely implies that there are different ways in which it can be assessed whether one material is more flexible than the other. It is undisputed that methods for measuring the modulus of elasticity or flexural strength are commonly known. The skilled person does thus not depend on the patent for such measuring methods. The fact that no such methods are specifically disclosed in the patent is therefore not pertinent to the question in hand.

Moreover, feature 1.8' does not require specific absolute parameter values for the flexibility of the materials. It specifies a relative difference in flexibility between two materials. To assess whether feature 1.8' is met, it is thus not even necessary to measure the flexibility of the materials in absolute terms. It would be sufficient to test a sample of each material using the same test in each case to determine their relative flexibilities, as suggested by the respondent. Since only a relative difference in flexibility between two materials is specified, the fact that no specific absolute values for the flexibility of the materials are stated in the patent is not relevant.

The appellant refers to Case Law, I.C.5.2.3. In decision T 1764/06 (cited in that section of Case Law), the board took the following view:

"In a situation where the applicants have used an unusual parameter feature to define their product, which unusual parameter feature represents the only

distinction over otherwise identical known products, and the applicants have decided not to provide evidence that the parameter feature as such represents a difference of the claimed products from the known products, no benefit of doubt can be accorded"

In decision T 131/03 (also cited in Case Law, I.C.5.2.3 and III.G.5.2.2.d)), the board set out the following:

"In inter-partes proceedings the burden of proof rests primarily upon the opponent. However, when the latter has established a strong presumption that unusual parameters as used to define the claimed subject-matter are inherently disclosed in the prior art, the patent proprietor cannot merely claim the benefit of the doubt. It is incumbent upon him to contribute in establishing to which extent such parameters, which he freely chose to use in the definition of his invention, actually distinguish the claimed subject-matter from the prior art."

However, in the case at hand, the appellant has not convincingly shown or established a strong presumption that the expression "more flexible" refers to a parameter that is unusual in the relevant technical field. Nor is this apparent from the cited case law. Decisions T 131/03 and T 740/01 do not address whether the definition that one material was more flexible than another material refers to an unusual parameter in the technical field of security devices.

Following the appellant's line of argument, there are different ways in which it can be assessed whether the specification in feature 1.8' is met. The burden

remains on the appellant to convincingly demonstrate that the skilled person (for example, applying one such commonly known method) considers the materials used in the security devices of the prior art to meet this specification. There is no reason why feature 1.8' should be disregarded for the assessment of novelty or inventive step.

The appellant submits that the different proportions of TPGDA in the layers 1 and 2 of Example 1 of document D2 as well as the presence of multifunctional urethane acrylate in layer 2 lead to different extents of cross-linking of the materials of these layers.

However, even if the cross-linking influences the flexibility of the material, it cannot be unambiguously derived from the disclosure of Example 1 of document D2 that the material of layer 1 is necessarily more flexible than the material of layer 2 once fully cured.

The appellant submits that document D2 disclosed that the layers 1 and 2 could be made of the same material and that the layer 1 was applied with a lower coating weight or in a thinner layer thickness than the layer 2. As a result, the thinner layer 1 exhibited greater flexibility than the layer 2.

However, feature 1.8' defines that:

"the at least one transparent material (207) forming the pedestal layer (249) is more flexible than the at least one transparent curable material (205) applied in step (a)(i) once fully cured" (Underlining added by the board.)

Feature 1.8' thus explicitly refers to the material forming the pedestal layer rather than to the pedestal layer itself and compares the flexibility of this material with that of the curable material 205. If, however, in an embodiment of Example 1 of document D2, the materials of the layers 1 and 2 are identical, the flexibility of these materials cannot be different. The appellant has not convincingly demonstrated that the thickness of a layer has any influence on the flexibility of the material used to form that layer.

The above claim interpretation is not contradicted by paragraph [0023], [0090], [0111] or [0113] of the patent, cited by the appellant. These paragraphs do not relate to feature 1.8'. For example, according to paragraph [0113] of the patent, the focusing elements may be formed from a flexible material too. However, it is not disclosed that the pedestal layer and the focusing elements in the same device are formed from the same flexible material.

The appellant submits that it was possible to imagine situations in which certain materials achieved the same value in one of the measurable parameters relating to the flexibility of the material but not in the other. However, the appellant has not convincingly shown that the materials disclosed in the context of Example 1 of document D2 meet the specification of feature 1.8' in view of a measurable parameter relating to the flexibility of the materials that the skilled person would consider. The hypothetical question of whether feature 1.8' was not met in view of a further measurable parameter relating to the flexibility of the materials is therefore irrelevant.

At least features 1.8' and 8.5' are not disclosed by Example 1 of document D2, such that the subject-matter of claims 1 and 8 as granted is new over document D2.

2.3 *Novelty in view of document D3*

The appellant submits that the first alternative of claim 8 was not new in view of the embodiment shown in Figure 10a of document D3. The respondent is of the opinion that document D3 did not disclose, *inter alia*, feature 8.5'. Regarding this feature, the appellant argues that document D3 explicitly disclosed that only the layer 21 (see Figure 10a) was compressed or deformed under mechanical pressure but not the microlenses 19a.

Figure 10b of document D3 shows a deformed, compressed state of the elastically deformable intermediate layer 21. However, from this illustration, it cannot be unambiguously and directly derived that other components of the device shown in that figure, such as the microlenses 19a, are not elastically deformable. Nor can this be inferred from the use of the reference numerals 4, 4d and 4e in the embodiment of Figures 16a and 16b of document D3. Even if it is not specifically stated in document D3 that the microlenses 19a in Figures 10a and 10b are flexible, this does not mean that the opposite is disclosed. Nor does the fact that the microlenses 19a retain the ability to focus light furthermore imply that they are not deformed under the mechanical pressure. It is technically possible that also a (slightly) deformed lens retains the ability to focus light. More importantly, it cannot be unambiguously and directly derived from document D3 that the material of the layer 21 is more flexible than the material of the microlenses 19a.

At least feature 8.5 is thus not disclosed in document D3, such that the subject-matter of claim 8 is new over that document.

2.4 *Novelty in view of document D4*

The appellant submits that document D4 disclosed the first alternative of claims 1, 8 and 15 as granted. Feature 1.8' was implicitly disclosed in document D4. That document disclosed that the transparent ink (used to create the lenses) comprised a UV-curable embossable lacquer or an acrylic-based coating or a coating based on other components such as nitrocellulose. These were not elastomeric. Document D4 furthermore disclosed that the primer layer was formed of a polyurethane which was elastomeric (as disclosed on pages 137, 138 of document D13).

The appellant has not submitted any evidence for its allegation that the acrylic-based or nitrocellulose-based coating disclosed in document D4 was necessarily less flexible than the polyurethane used in the primer disclosed in document D4. The appellant submits that paragraphs [0111] to [0113] of the patent disclosed that acrylic-based or nitrocellulose-based coating could be used for the curable material 205. This, however, does not imply that the polyurethane used for the primer in document D4 was necessarily more flexible than the acrylic-based or nitrocellulose-based coating disclosed in document D4. Polyurethane as well as acrylic-based and nitrocellulose-based coatings form classes of compounds in which each compound may have different properties. Even assuming that a specific polyurethane material is known that is more flexible than a specific acrylic-based coating, this would not

imply that feature 1.8' is disclosed in document D4. This view is not altered by the appellant's reference to document D13, which discloses that there are polyurethane compounds that are elastic without, however, indicating that each and every polyurethane compound was more flexible than all acrylic-based or nitrocellulose-based coatings.

Nor is this view affected by the appellant's allegation that, in document D4, the primer layer was thinner than the transparent ink. Even if this was true, it could not be unambiguously derived that the material of the primer layer must be more flexible than the material of the transparent ink.

Feature 1.8' (and, for the same reasons, features 8.5' and 15.9') are not disclosed in document D4. Consequently, the subject-matter of claims 1, 8 and 15 as granted is new in view of that document.

2.5 *Novelty in view of document D5*

The appellant submits that the first alternative of claims 1 and 8 (including features 1.8' and 8.5', respectively) was not new in view of document D5.

Regarding feature 1.8', the appellant submits that the polymer resin 20 used to form the lenses in document D5 could be an acrylic-based resin such as an acrylated urethane polyester oligomer which, according to the appellant, formed a hard, brittle material. The binder coating 13 was disclosed in document D5 as being a polymethyl acrylic. The appellant concludes that it must thus implicitly be flexible.

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 Case Law, I.C.4.3).

There is no reason to assume that the polymethyl acrylic binder coating 13 disclosed in document D5 must necessarily be more flexible than the resin 20 used to form the lenses and that, thus, nothing other than this forms the subject-matter disclosed in document D5. Even assuming that document D5 discloses that the polymethyl acrylic forming the binder coating 13 had some degree of flexibility, this would not imply that it is necessarily more flexible than the material forming the polymer resin 20, irrespective of the compound used for the polymethyl acrylic or the polymer resin 20. Nor can this unambiguously and directly be derived from paragraph [0091] of the patent.

At least features 1.8' and 8.5' are not disclosed in document D5 such that the subject-matter of claims 1 and 8 as granted is new in view of document D5.

2.6 *Novelty in view of document D10*

The appellant submits that the embodiment shown in Figure 9 of document D10 disclosed all features of the second alternative of claim 8 as granted.

Regarding features 8.2 and 8.5'', the appellant refers to page 27, lines 15 to 26 of document D10, which is part of the description of the embodiment shown in Figure 8.

In the Reasons for the decision under appeal, the opposition division set out that the appellant had combined features of different embodiments (i.e. the embodiments shown in Figures 8 and 9 of document D10). It was, however, not permissible, for assessing novelty, to combine separate items belonging to different embodiments described in the same document, unless such a combination had specifically been suggested, which was not the case here. In any case, no explicit disclosure could be found in document D10 that the layer 102 might be transparent.

The appellant submits that a combination of features relating to the layer 102 disclosed in the context of the embodiments of Figures 8 and 9 was suggested by page 28, lines 1, 2 and 17 to 19 of document D10.

The cited passages refer to the embodiment shown in Figure 9 whose description starts on page 27, line 28 of document D10. Page 28, lines 1 and 2 of document D10 discloses that the mask layer 102 (see Figure 9) is formed by a laser-absorbing or laser-reflecting printed layer. Page 28, lines 17 to 19 of document D10 discloses that, outside of the gap region 34, in contrast, the incident laser radiation is absorbed or reflected, such that no microholes are produced in the recording layer 40 there. Neither of these passages refers to the embodiment shown in Figure 8 of document D10 or, more specifically, to details of the laser-absorption layer 92 disclosed for the embodiment of Figure 8 on page 27, lines 15 to 26 of document D10. For assessing novelty, it is therefore not permissible to combine such details disclosed in the context of the embodiment shown in Figure 8 of document D10 with other features disclosed in the context of Figure 9 of document D10. The skilled person cannot unambiguously

and directly derive that the mask layer 102 is transparent. This view is unaffected by the appellant's submission that the patent discloses that transparent materials may be optically detectable. This disclosure does not support the conclusion that all optically detectable materials are transparent.

The appellant submits that the combination of the mask layer 102 and the material filling the gap region 34 in Figure 9 of document D10 constituted a pedestal layer.

Even assuming that the skilled person considered the combination of the mask layer 102 and the material filling the gap region 34 in Figure 9 of document D10 to be a pedestal layer, the only transparent material of that "pedestal layer" would be the material filling the gap region 34. However, it is not unambiguously and directly derivable from document D10 that the material filling the gap region 34 comprises at least two transparent materials having different optical detection characteristics, as defined in feature 8.5''.

Consequently, at least feature 8.5'' is not disclosed by the embodiment shown in Figure 9 of document D10, such that the subject-matter of claim 8 is new over that document.

2.7 *Novelty in view of document D11*

The appellant sets out that the subject-matter of the first alternative of claim 8 (including feature 8.5') was disclosed in document D11. It refers to paragraphs [0072] and [0073] of document D11 and infers from these passages that the material of the optical spacer 18 was more flexible than the material of the focusing element layer 14.

Paragraph [0072] of document D11 discloses that the focusing element and icon layers 14, 16 are usually cross-linkable thermoset layers and that increased radiation exposure times do not serve to alter the stiffness of the optical spacer, so it retains flexibility relative to the icon layer. This, however, does not imply that the material of the optical spacer 18 must necessarily be more flexible than the material of the focusing element layer 14. Moreover, the fact that paragraph [0073] of document D11 discloses that the focusing element layer 14 retains its good wear and abrasion resistance does not have any bearing on whether its material is less flexible than the material of the optical spacer 18.

Feature 8.5' is thus not disclosed in document D11, such that the subject-matter of claim 8 is new over that document.

2.8 *Novelty in view of document D12*

The appellant is of the opinion that the subject-matter of the third alternative of claim 8 (including feature 8.5''') was disclosed by the embodiment of Figure 10 of document D12.

In a first line of argument, the appellant submits that the lens support mesa 144 shown in Figure 10 of document D12 was a pedestal layer within the meaning of claim 8 as granted.

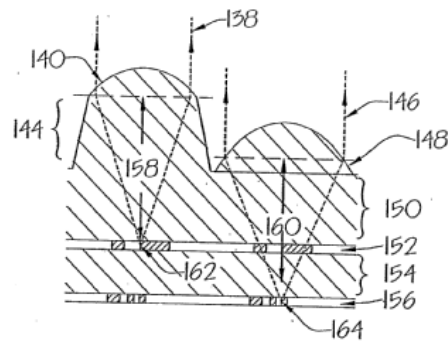


Fig. 10

The respondent contests this view and submits that the lens support mesa 144 was not a separate layer from the lens 140 formed on its top. In its view, claim 8 as granted required the provision of the focusing element array and the pedestal layer as distinct components.

This issue can be left open since, even if the lens support mesa 144 was considered a pedestal layer, it does not have a first height in a first sub-region and a second different height in a second sub-region, as defined in feature 8.5''. The appellant has not convincingly shown that the skilled person would consider the absence of the lens support mesa in a sub-region to be the same as the presence of a lens support mesa having a height of zero. Nor is such an interpretation supported by paragraphs [0018] and [0019] of the patent.

In a second line of argument, the appellant considers the combination of the lens support mesa 144 and the optical separator 150 to be a pedestal layer and the icon separator 154 to be a focusing element support layer as defined in claim 8 as granted. Referring to paragraph [0038] of the patent, the appellant submits that the patent did not define the focusing element support layer as a support layer.

The appellant has not convincingly demonstrated that the skilled person would have considered the icon separator 154 to be a focusing element support layer as defined in claim 8 as granted. Based on their common general knowledge, the skilled person would have understood the term "focussing element support layer" to be a layer that supports the focusing elements.

This view is not in contradiction with paragraph [0038] of the patent. It is not derivable from this paragraph that the focusing element support layer would not have the function of supporting the focusing elements. This paragraph discloses that the focusing element support layer is a layer on the surface from which the focusing elements are formed, which is implied by feature 8.2. Examples are then given in which the focusing element support layer is a polymer substrate or another layer which is applied to a document substrate or used as a carrier from which the focusing elements are later transferred to a document substrate. These are examples in which the focusing element support layer typically acts as a support for the focusing elements.

Paragraph [0038] of the patent therefore does not indicate that the above common understanding of the skilled person would be wrong. It is not derivable from this paragraph that the expression "focussing element support" in "focussing element support layer" must be ignored or that it does not imply any technical features. Nor are the arrangements shown in Figures 12(a), (b) and (c) of the patent in contradiction with this claim interpretation.

The appellant has not convincingly shown that the icon separator 154 shown in Figure 10 of document D12 is a layer that supports the focusing elements. The skilled

person would not have considered the icon layer spacer 154 to be a focusing element support layer. If the appellant's second line of argument was accepted, features 8.2, 8.3., 8.4 and 8.5'' would therefore not be disclosed in document D12.

The subject-matter of claim 8 as granted is thus new over document D12.

2.9 *Dependent claims as granted*

The subject-matter of the dependent claims as granted is new at least for the same reasons set out above for the independent claims.

2.10 *Summary on the ground for opposition under Article 100(a) in conjunction with Article 54 EPC*

The ground for opposition under Article 100(a) in conjunction with Article 54 EPC does not prejudice the maintenance of the patent as granted.

3. **Patent as granted - Ground for opposition under Article 100(a) in conjunction with Article 56 EPC**

3.1 *Example 2 of document D1 as the closest prior art*

The appellant submits that the subject-matter of the first alternative of claims 1 and 8 as granted (including features 1.8' and 8.5', respectively) did not involve an inventive step in view of Example 2 (i.e. the embodiment shown in Figure 2) of document D1. The appellant is of the opinion that the substrate 10 in Figure 2 of document D1 is a focusing element support layer as defined in the claims and that

document D1 discloses that the layer 3 shown in Figure 2 is provided with microlenses.

It is common ground between the parties that feature 1.7 is not disclosed by Example 2 of document D1. The appellant considers that the objective technical problem is to suggest an alternative method of making a security device with a focusing element array cooperating with an image element array. The respondent contests this view.

Example 2 of document D1 does not involve cooperation between a focusing element array and an image element array. The claimed solution therefore cannot be seen as suggesting an alternative solution in this regard.

The appellant's line of argument is also not convincing for the following reasons.

Paragraph [0067] of document D1 mentions an embossing of layer 3 but does not disclose that the layer 3 is provided with microlenses or, for that matter, that the security element shown in Figure 2 includes an image element array. Nor can this be derived from paragraph [0006] or [0035] or claim 1 or 10 of document D1.

Even assuming that the skilled person was prompted to emboss layer 3 shown in Figure 2 of document D1 to provide it with an array of microlenses, it is not apparent why the focal plane of the microlenses provided in layer 3 must be located on the first surface of the substrate 10 or at any point beyond that first surface.

The appellant refers to paragraphs [0004] and [0006] of the patent and derives from these passages that the focal plane of typical security elements was substantially on the surface of a support (adjacent to the spacer) or on or outside the second surface of the spacer layer serving as a support. According to the appellant, this was also the case for the security elements discussed in document D1.

Paragraphs [0004] and [0006] of the patent do not belong to the prior art. Moreover, paragraph [0004] of the patent discloses that "*[s]ecurity devices comprising focussing elements typically require [...]*" (underlining added by the board). It is not apparent, let alone unambiguously and directly derivable from document D1, that Example 2 of document D1 concerns such a "typical" security device discussed in the cited passages of the patent.

The appellant also submits that to provide the desired microlens effect (see paragraph [0006] of document D1), the focal plane of the microlenses of such a security element must be located on the first surface of the substrate (which the appellant identifies as the focusing element support layer) or at any point beyond the first surface of the substrate.

However, the security element according to Example 2 of document D2 does not include an image element array. Moreover, the substrate 10 shown in Figure 2 of document D1 is not the substrate of the final security element since the layers 1, 2 and 3 are transferred to a security document (see, for example, paragraph [0061] of document D1).

The appellant submits that the skilled person would have considered using the layer 3 provided with a microlens structure as the surface of a security element not to be applied but provided, for example, in the form of a security strip embedded in a security paper (see document D1, paragraph [0044] and claim 12).

However, the appellant has not set out any reasons why the skilled person would be prompted to do so. Although paragraph [0044] and claim 12 of document D1 mention strip-based security elements, there is no suggestion to use the arrangement of Figure 2 including substrate 10 as a strip-based security device, i.e. without a transfer process.

Since, according to the disclosure of document D1, the substrate 10 shown in Figure 2 is not present in the final security element after transfer, it was not obvious to arrange the focal plane of microlenses provided in layer 3 with particular reference to that substrate 10, i.e. on a surface of that substrate or beyond that surface. This holds true, in particular, when layer 1 is the outer layer of the transferred security element and the viewer looks at the document through layers 1, 2 and 3.

The subject-matter of claim 1 and, for, *mutatis mutandis*, the same reasons, claim 8 involves an inventive step in view of Example 2 of document D1 as the closest prior art.

3.2 *Document D6 in combination with the common general knowledge or document D1 or D2*

The appellant submits that the subject-matter of the first alternative of claims 1 and 8 (including

features 1.8' and 8.5') as granted did not involve an inventive step in view of a combination of document D6 and the common general knowledge or document D1 or D2.

It is common ground between the parties that document D6 does not disclose feature 1.8'. The respondent submits that document D6 also failed to disclose feature 1.1 and that it was furthermore not an appropriate starting point for the examination of inventive step.

However, even if starting from document D6 as the closest prior art and assuming that feature 1.8' was the only differentiating feature of the first alternative of claim 1, the subject-matter of claim 1 would not have been obvious in view of that document for the following reasons.

The respondent suggests that the objective technical problem solved was how to reduce damage to the focusing elements during handling.

The appellant contests this view. It submits that claim 1 as granted did not exclude the possibility that the material of the pedestal layer was hard, rigid and brittle. The number of materials and material thicknesses covered by the claim was such that it was inherently unlikely that all the claimed materials (or at least substantially all of them) would have a buffering/attenuation function.

However, even assuming that there is only a small difference in the flexibility of these materials, this would still achieve a reduction in damage caused to the lenses during handling since the pedestal layer would still deflect and/or absorb deflections to some degree.

This technical effect is achieved in view of feature 1.8' across the whole ambit of the claim. This view is unaffected by the consideration that the degree to which the pedestal layer deflects and/or absorbs deflections may vary depending on the degree of flexibility of the material used and that further features (that are not included in claim 1) may be present which also influence the robustness of the security element.

The objective technical problem is therefore how to reduce damage to the focusing elements during handling.

Documents D1 and D2 do not address the objective technical problem. The skilled person would not have been prompted to consult either of these documents when trying to solve it. Even if they did, the skilled person would not have found any solution to the objective technical problem, let alone the solution defined in claim 1 as granted. Nor has the appellant convincingly demonstrated that the claimed solution to the objective technical problem was commonly known.

The subject-matter of the first alternative of claim 1 (and, for the same reasons, claim 8) as granted was not obvious in view of a combination of document D6 and the common general knowledge or one of documents D1 and D2.

In this situation, it can be left open whether document D2 belongs to the state of the art under Article 54(2) or (3) EPC.

3.3 *Further objections of lack of inventive step*

In point 6.1 of the statement of grounds of appeal, the appellant submits that the subject-matter of claims 1,

8 and 15 as granted did not involve an inventive step in view of any of documents D1, D2, D4, D5, D10, D11 and D12. It explains that a detailed discussion of inventive-step activity could not be presented with the statement of grounds of appeal since this would require that there was at least one distinguishing feature between the claimed subject-matter and the content of document D1. The appellant refers to Case Law 2019, IV.C.3.4.2, second paragraph.

The cited passage of Case Law 2019 is taken from section IV.C.3.4, "Fresh grounds for opposition". It addresses a situation in which a patent has been opposed on the grounds of lack of novelty and lack of inventive step, and only the ground of novelty has been substantiated. The passage sets out circumstances under which the objection of lack of inventive step is considered not to constitute a fresh ground for opposition although the ground of lack of inventive step has not been specifically substantiated.

In the case in hand, it is undisputed that the ground for opposition under Article 100(a) in conjunction with Article 56 EPC was raised in the notice of opposition and that it does not constitute a fresh ground for opposition.

The question whether the ground for opposition of lack of inventive step is a fresh ground for opposition is different from whether an objection of lack of inventive step raised in the statement of grounds of appeal meets the requirements of Article 12(3) RPBA. In accordance with this provision, the statement of grounds of appeal and the reply must contain a party's complete appeal case. Accordingly, they must set out clearly and concisely the reasons why it is requested

that the decision under appeal be reversed, amended or upheld, and should expressly specify all the requests, facts, objections, arguments and evidence relied on. In accordance with Article 12(5) RPBA, the board has discretion not to admit any part of a submission by a party which does not meet the requirements in Article 12(3) RPBA.

In the case at hand, the requirements set out in Article 12(3) RPBA are only met for the objections of lack of inventive step addressed in points 3.1 and 3.2 above. The mere reference to documents D2, D4, D5, D10, D11 and D12 as the closest prior art in the statement of grounds of appeal does not render it self-explanatory that the subject-matter of claim 1, 8 or 15 as granted does not involve an inventive step in view of any of these documents. The board, exercising its discretion under Article 12(5) RPBA, does not admit any of these objections into the appeal proceedings.

3.4 *Dependent claims as granted*

The subject-matter of the dependent claims as granted involves an inventive step at least for the same reasons set out above for the independent claims.

3.5 *Summary on the ground for opposition under Article 100(a) in conjunction with Article 56 EPC*

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

4. **Conclusions**

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

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



D. Hampe

P. Lanz

Decision electronically authenticated