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**Datasheet for the decision
of 5 October 2020**

Case Number: T 0099/17 - 3.3.02

Application Number: 11152368.4

Publication Number: 2308933

IPC: C09D11/00

Language of the proceedings: EN

Title of invention:

Ink set, ink container, inkjet recording method, recording device, and recorded matter

Patent Proprietor:

Seiko Epson Corporation

Opponent:

ECKART GmbH

Headword:

Relevant legal provisions:

EPC Art. 123(2)

Keyword:

Amendments

Decisions cited:

G 0002/10

Catchword:



Beschwerdekammern

Boards of Appeal

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Case Number: T 0099/17 - 3.3.02

D E C I S I O N
of Technical Board of Appeal 3.3.02
of 5 October 2020

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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 8 November 2016
revoking European patent No. 2308933 pursuant to
Article 101(3) (b) EPC.**

Composition of the Board:

Chairman M. O. Müller
Members: S. Bertrand
R. Romandini

Summary of Facts and Submissions

I. The appeal by the patent proprietor ("appellant") lies from the opposition division's interlocutory decision to revoke European patent no. 2 308 933 on the ground that none of the requests then on file met the requirements of Article 123(2) EPC.

II. The main request contained a set of four claims, independent claim 1 of which read as follows:

"An inkjet recording method comprising ejecting droplets of ink composition and causing the droplets to adhere to a recording medium, an image being formed using an ink set comprising:

an oil based ink composition containing a metallic pigment;

a chromatic color ink composition which is an oil based ink composition and which contains a chromatic color pigment; and

at least one or more oil based ink compositions selected from the group consisting of a black ink composition containing a black pigment and a white ink composition containing a white pigment;

wherein the method comprises forming an image on the recording medium using the oil based ink composition containing a metallic pigment, and then ejecting the chromatic color ink composition and the black and/or white ink composition onto the image of the oil based ink composition containing the metallic pigment, an image being formed from the chromatic color ink composition."

- III. In its decision, the opposition division came to the conclusion, *inter alia*, that claims 1 and 3 according to the then pending main request and claim 1 of each of the then pending auxiliary requests 1 to 5 did not fulfil the requirements of Article 123(2) EPC.
- IV. In its statement setting out the grounds of appeal, the appellant contested the reasoning of the opposition division and submitted sets of claims according to the main request and the first to seventh auxiliary requests.
- V. In its reply to the grounds of appeal, the opponent ("respondent") requested that the appeal be dismissed and rebutted the appellant's arguments. It submitted that the claims of the main request and the auxiliary requests did not comply with Article 123(2) EPC.
- VI. In a further letter, the appellant submitted further arguments regarding the compliance of the claims of the requests with Article 123(2) EPC.
- VII. In its preliminary opinion of 23 June 2020, the board's view that claim 1 of the main request did not fulfill the requirements of Article 123(2) EPC was communicated to the parties.
- VIII. Oral proceedings before the board were held on 5 October 2020. During the oral proceedings, the appellant withdrew all auxiliary requests except for the "third auxiliary request" filed with the statement of grounds of appeal.
- IX. The appellant requested that:
- the decision under appeal be set aside and that the patent be maintained on the basis of the main

request filed with the statement of grounds of appeal,

- alternatively, the patent be maintained on the basis of the auxiliary request ("Third auxiliary request") filed with the statement of grounds of appeal.

The respondent requested that the appeal be dismissed.

X. The appellant's case, where relevant to the present decision, may be summarised as follows.

Main request

- Claim 1 of the main request was based on points [15], [13] and [1] of paragraph [0010], and paragraphs [0097], [0098], [0100] and [0135] of the application as filed, in particular in view of the fact that claim 1 of the main request required no limitation about the relative order of ejection of the chromatic color ink and the black and/or white ink.
- The term "metallic gloss" was a general term referring to an image formed from a metallic ink. The image formed from the metallic ink might have any level of metallic gloss between a matte finish and a high gloss level. The reference to metallic gloss in the passages of the application as filed did thus not imply a limitation of the gloss level. The omission of this level in claim 1 did therefore not contravene Article 123(2) EPC.

First auxiliary request

- Claim 1 of the first auxiliary request was based on paragraph [0135], pattern 2 of the application as filed.

- There was a "logic" in the application as filed in paragraph [0010], points [14] to [16], and paragraphs [0097], [0098] and [0100] involving going from (i) a process in which the metallic ink and all remaining inks were applied simultaneously, to (ii) a process in which the metallic ink was applied first and the remaining inks were applied together subsequently, to (iii) a process in which all inks were applied separately. Patterns 1 to 3 in paragraph [0135] were to be read with the same logic, thus meaning that, in pattern 2, the black ink was ejected together with the chromatic color ink.

XI. The respondent's case, where relevant to the present decision, may be summarised as follows.

Main request

- Claim 1 of the main request clearly referred to a two-step order of ink ejection. The second step of ink ejection in claim 1 of the main request required that the chromatic color ink and the black and/or white ink were ejected together onto the image formed with the metallic ink.
- Each of paragraphs [0097], [0098], [0100] and [0135] of the application as filed referred to a specific order of the ejection of the metallic ink, chromatic color ink, and the black and/or white ink. However, none of the specific orders referred to in these paragraphs corresponded to the two-step order of ink ejection of claim 1 of the main request.
- The application as filed presented an image with metallic gloss as an essential feature. Contrary to this, the omission of the term "metallic gloss" in

claim 1 of the main request generalised the image to any finish and the metallic ink with specific properties for achieving the metallic gloss to any metallic ink. Paragraphs [0014]-[0016] of the application as filed taught that the average particle diameter was of importance for achieving the metallic gloss. Furthermore, the shape of the pigment could not be spherical or irregular. Such pigments would scatter incident light in all directions, leading to a dull appearance.

First auxiliary request

- Unlike claim 1, paragraph [0135], pattern 2 of the application as filed referred to an order of ink ejection first involving the ejection of the metallic ink followed by the ejection of the black ink to mask gloss, and then ejection of the chromatic color ink.
- Paragraph [0010], items [14] to [16], and paragraphs [0097], [0098] and [0100] of the application as filed did not clarify the ambiguous disclosure of paragraph [0135] of the application as filed and the "logic" referred to by the appellant could not be derived from these passages.

Reasons for the Decision

Main request

1. The claims of the main request correspond to the claims of the main request, considered by the opposition division in its decision, except that claims 3 to 5 are cancelled.

2. Article 123(2) EPC

2.1 Claim 1 relates to an inkjet recording method, wherein the method comprises forming an image on the recording medium using the oil based ink composition containing a metallic pigment (metallic ink), and then ejecting the chromatic color ink composition (chromatic color ink) and the black and/or white ink composition (black and/or white ink) onto the image of the metallic ink, an image being formed from the chromatic color ink.

2.2 The appellant cited the following passages of the application as filed as a basis for claim 1 of the main request: paragraphs [0097], [0098], [0100] and [0135], and points [15], [13] and [1] of paragraph [0010]. It was a matter of dispute whether these passages disclose the order of ink ejection according to claim 1 of the main request and whether the omission of the term "metallic gloss" in the claim generalised the teaching to any finish of the image formed in contravention with Article 123(2) EPC.

2.3 Order of ink ejection

2.3.1 Claim 1 of the main request contains the following wording:

"wherein the method comprises forming an image on the recording medium using the oil based ink composition containing a metallic pigment, and then ejecting the chromatic color ink composition and the black and/or white ink composition onto the image of the oil based ink composition containing the metallic pigment, an image being formed from the chromatic color ink composition"

2.3.2 It thus requires the following two-step order of ink ejection for forming an image:

- (a) forming an image on the recording medium using the metallic ink, and then
- (b) ejecting the chromatic color ink and the black and/or white ink onto the image formed with the metallic ink.

2.3.3 The appellant submitted that claim 1 of the main request did not contain any limitation of the relative order of ejection of the chromatic color ink and the black and/or white ink, provided that the chromatic color ink and the black and/or white ink were ejected after the metallic ink. Therefore, claim 1 in particular covered a three-step process in which first the metallic ink, then the chromatic color ink and lastly the black and/or white ink were ejected.

The board disagrees with this view.

If claim 1 covered an embodiment in which the black and/or white ink was ejected after the chromatic color ink, as argued by the appellant, it would be ejected onto the chromatic color ink rather than the image formed with the metallic ink, as required by claim 1. Thus, the appellant's submission that claim 1 of the main request has no limitation of the relative order of ejection of the chromatic color ink and the black and/or white ink is not accepted.

2.3.4 Paragraph [0097] of the application as filed discloses that the metallic ink, the chromatic color ink, the black ink, and the white ink can be simultaneously ejected to form an image. This paragraph does not refer to any two-step order, let alone a two-step order comprising the ejection of a metallic ink followed by the ejection of a chromatic color ink and a black and/

or white ink as required by claim 1 of the main request.

The first sentence of paragraph [0098] of the application as filed states that "*If the oil based ink composition containing the metallic pigment and the oil based ink compositions such as the chromatic color ink composition, black ink composition, and white ink composition are ejected separately, the image is preferably formed by using the oil based ink composition containing metallic pigment to form an image with a metallic gloss, and then forming an image using the chromatic color ink compositions*". From this sentence, it can be derived that an image is first formed by using the metallic ink and then an image is formed by using the chromatic color ink. Unlike claim 1 of the main request, however, this sentence does not specify whether and when the black and/or white ink is ejected, and even less so can it be derived from this sentence that the black and/or white ink can be ejected simultaneously with the chromatic color ink, as required in claim 1 of the main request.

The combination of points [15], [13] and [1] of paragraph [0010] of the application as filed refers to a two-step order of ink ejection comprising, as the first step, forming an image on the recording medium using the metallic ink, and as a second step, forming an image of any color using the chromatic color ink. However this combination, like paragraph [0098] of the application as filed, does not specify whether and when the black and/or white ink is ejected.

Thus, for the same reason as paragraph [0098] of the application as filed, the combination of points [15], [13] and [1] of paragraph [0010] of the application as

filed is not a valid basis for claim 1 of the main request.

Paragraph [0100] of the application as filed discloses that "*...an image with metallic gloss can be formed using the oil based ink composition containing a metallic pigment, then forming an image with a metallic gloss of any color using the chromatic color ink composition, and then forming an image using the black ink composition and/or the white ink composition.*"

Therefore, this paragraph discloses a **three**-step order of ink ejection: an image is first formed by using the metallic ink, then an image is formed by using the chromatic color ink, and then an image is formed by using the black and/or white ink. Accordingly, this paragraph does not specify that the black and/or white ink can be ejected simultaneously with the chromatic color ink, as in claim 1 of the main request.

Paragraph [0135], pattern 2 of the application as filed discloses that "*Printing was performed by ejecting the metallic ink compositions, and then printing was performed by ejecting the chromatic color ink composition and the black ink composition. In this case, the gloss could be masked by printing the black ink composition over the metallic print.*" The first sentence of the above passage mentions a first step wherein the metallic ink is ejected and a second step wherein the chromatic color ink and the black ink are ejected. However, in this pattern there is no mention of any white ink, let alone of a white ink that can be simultaneously ejected with the chromatic color ink. Therefore, this passage does at least not provide a basis for the embodiment of claim 1 where a white ink is ejected together with the chromatic color ink. In fact, paragraph [0135], pattern 2 of the application as filed does not provide a basis for the embodiment in

which a black ink is ejected together with the chromatic color ink either. This will be discussed below when addressing the first auxiliary request (see points 5.3 and 5.4).

2.3.5 Therefore, none of the passages provided by the appellant can serve as a basis for the order of ink ejection defined in claim 1 of the main request. This feature of claim 1 of the main request thus contravenes Article 123(2) EPC.

2.4 Metallic gloss

2.4.1 The respondent submitted that the omission of the term "metallic gloss" in claim 1 of the main request did not fulfill the requirements of Article 123(2) EPC.

2.4.2 It is established case law that a feature disclosed in combination with other features of the application as filed can only be omitted in a claim amended by the introduction of the other features if it is directly and unambiguously derivable from the application as filed that the omitted feature is optional.

Paragraphs [0001] and [0007] belonging to the background and summary section of the application as filed, presenting the invention in general terms, refer to a film **with a metallic gloss**. Paragraph [0012], in the very first sentence of the exemplary embodiments of the application as filed, also refers to an ink set with a composition that is such that "*an image can be formed with a **metallic gloss** that is colored by chromatic color pigment, black pigment, and white pigment.*" (emphasis added). Based on these general introductory statements made in the application as filed, there can be no doubt that the feature of having metallic gloss is an essential feature of the invention

described in the application as filed and not an optional feature.

The fact that metallic gloss is essential is confirmed by further parts of the application as filed:

Paragraphs [0098] and [0100] of the application as filed refer to an image *with a **metallic gloss*** which is formed with the metallic ink.

Paragraph [0135], pattern 2 in combination with tables 8-11 show that a metallic gloss A or AA is achieved by the compositions of the invention.

Hence, if anything, it can be directly and unambiguously derived from the application as filed that the feature of having metallic gloss is essential. By no means can it be derived from the application as filed that this feature is optional.

Contrary thereto, the term "metallic gloss" is missing in claim 1 of the main request. Thus, the omission of the term "metallic gloss" in claim 1 of the main request contravenes Article 123(2) EPC.

- 2.4.3 The appellant submitted that the term "metallic gloss" was a general term referring to an image formed from a metallic ink. The image formed from the metallic ink might have any level of metallic gloss between a matte finish and a high gloss level, as disclosed in paragraph [0093] of the application as filed. The reference to metallic gloss in the description of the application as filed did thus not imply a limitation of the gloss level. The omission of the term "metallic gloss" in claim 1 therefore did not contravene Article 123(2) EPC.

The board does not agree. A metallic gloss as required by the application as filed, even though it may range from a matte finish to a high gloss finish, still requires a certain degree of metallic gloss. Accordingly, the metallic gloss property implies a limitation to the ink set and more particularly to the metallic ink. This is explained in paragraphs [0014]-[0016] which teach that the average particle diameter is of importance for the metallic gloss to be achieved, *inter alia*. In particular, paragraph [0016] states that "*The 50% average particle diameter R50...is preferably between 0.5 and 3 mm, and more preferably between 0.75 and 2 mm, from the **perspective of metallic gloss** and printing stability*" (emphasis added by the board). The metallic gloss property also implies limitation to the shape of the metallic pigment which cannot have a spherical or irregular form, as submitted by the respondent. Such pigments would scatter incident light in all directions leading to a dull appearance, which is not a metallic gloss. In the absence of the term "metallic gloss", claim 1 generalises the image to any finish and the metallic ink with specific properties for achieving the metallic gloss to any metallic ink.

Thus, the omission of the term "metallic gloss" in claim 1 of the main request adds subject-matter that goes beyond the content of the application as filed, contrary to the requirements of Article 123(2) EPC.

3. For these reasons, the main request is not allowable.

First auxiliary request ("Third auxiliary request" filed with the statement of grounds of appeal)

4. Claim 1 of the first auxiliary request differs from claim 1 of the main request on account of the additional features "wherein the recording medium has no ink-receptive layer and is heated", and in that the ink set is restricted to a metallic ink, a chromatic color ink and a **black** ink (claim 1 of the main request: black and/or white ink).
5. Article 123(2) EPC
 - 5.1 Following the interpretation of claim 1 of the main request, claim 1 of the auxiliary request requires, in the second step of the claimed method, the step of ejecting together the chromatic color ink and the black ink onto the image formed with the metallic ink.
 - 5.2 The appellant submitted that paragraph [0135], pattern 2, was a valid basis for claim 1 of the first auxiliary request.
 - 5.3 As summarised in G 2/10 (JO 2012, 376, point 4.3 of the reasons), *"any amendment to the parts of a European patent application or of a European patent relating to the disclosure (the description, claims and drawings) is subject to the mandatory prohibition on extension laid down in Article 123(2) EPC and can therefore, irrespective of the context of the amendment made, only be made within the limits of what a skilled person would derive **directly and unambiguously**, using common general knowledge, and seen objectively and relative to the date of filing, from the whole of these documents as filed"* (emphasis added).

As set out above (2.3.4, *supra*), paragraph [0135], pattern 2 of the application as filed discloses that "*Printing was performed by ejecting the metallic ink compositions, and then printing was performed by ejecting the chromatic color ink composition and the black ink composition. In this case, the gloss could be masked by printing the black ink composition over the metallic print.*". However, in this pattern there is no direct and unambiguous disclosure of a second step of ejecting **together** the chromatic color ink and the black ink onto the image formed with the metallic ink. Indeed, the last sentence of paragraph [0135], pattern 2 of the application as filed mentions that the black ink is printed over the metallic ink, i.e. before the chromatic color ink. This sentence is inconsistent with the previous sentence stating that "*printing was performed by ejecting the chromatic color ink composition and the black ink composition*". Thus, paragraph [0135], pattern 2 of the application as filed is an **ambiguous** disclosure as regards the sequence of printing the chromatic color and the black ink. The skilled person would thus not directly and **unambiguously** derive the specific sequence of printing defined in claim 1 of the first auxiliary request from this passage.

- 5.4 The Appellant argued that there was a "logic" in the application as filed in paragraph [0010], items [14] to [16], and paragraphs [0097], [0098] and [0100] involving sequentially increasing the number of process steps from one single to three separate steps, namely going from (i) a process where the metallic ink and all remaining inks are applied simultaneously (item [14] of paragraph [0010] and paragraph [0097]), to (ii) a process where the metallic ink is applied first and the remaining inks are applied together subsequently (item

[15] of paragraph [0010] and paragraph [0098]), to (iii) a process where all inks are applied separately (item [16] of paragraph [0010] and paragraph [0100]). Patterns 1 to 3 of paragraph [0135] were to be read with the same logic, thus meaning that patterns 1 to 3 corresponded to processes (i) to (iii). Hence, in pattern 2, the black ink was ejected together with the chromatic color ink.

The board does not share the appellant's view. In fact, the paragraphs in the application as filed that allegedly disclose process (ii), i.e. paragraph [0010], item [15], and paragraph [0098] do not specify when the black ink is ejected. Thus, they do not disclose the alleged process (ii) with two process steps. Hence, there is no logic involving going from one to two to three process steps. Irrespective of this, the board fails to see any reasons why it can be assumed that the alleged "logic" disclosed by paragraph [0010], items [14] to [16], and paragraphs [0097], [0098] and [0100] of the application as filed is mirrored in patterns 1 to 3 of paragraph [0135] of the application as filed. The appellant's argument thus must fail.

For these reasons, the ambiguous disclosure of paragraph [0135], pattern 2 of the application as filed cannot represent a valid basis for the subject-matter of claim 1 of the first auxiliary request.

- 5.5 For the same reason as those given for the main request, the omission of the term "metallic gloss" for claim 1 of the first auxiliary request adds subject-matter that goes beyond the content of the application as filed, contrary to the requirements of Article 123(2) EPC.

- 5.6 In view of the above, claim 1 of the first auxiliary request contravenes Article 123(2) EPC.
6. The board concludes that none of the appellant's claim requests is allowable under Article 123(2) EPC.

Order

For these reasons it is decided that:

1. The appeal is dismissed.

The Registrar:

The Chairman:



N. Maslin

M. O. Müller

Decision electronically authenticated