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Datasheet for the decision of 12 September 2019

Case Number: T 0884/15 - 3.3.09

Application Number: 07025187.1

Publication Number: 1939692

IPC: G03F7/031, G03F7/32

Language of the proceedings: EN

Title of invention:
Method for preparation of lithographic printing plate

Patent Proprietor:
FUJIFILM Corporation

Opponent:
AGFA NV

Headword:

Relevant legal provisions:
EPC Art. 100(a), 54, 56, 100(b)
RPBA Art. 12(4)

Keyword:

Decisions cited:

Catchword:

Europäisches Patentamt
European Patent Office
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Beschwerdekammern

Boards of Appeal

Chambres de recours

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Case Number: T 0884/15 - 3.3.09

D E C I S I O N
of Technical Board of Appeal 3.3.09
of 12 September 2019

Appellant: (Patent Proprietor)	FUJIFILM Corporation 26-30, Nishiazabu 2-chome Minato-ku Tokyo (JP)
Representative:	Hoffmann Eitle Patent- und Rechtsanwälte PartmbB Arabellastraße 30 81925 München (DE)
Respondent: (Opponent)	AGFA NV Septestraat 27 2640 Mortsel (BE)
Representative:	Goedeweeck, Rudi AGFA NV Intellectual Property Department Septestraat 27 2640 Mortsel (BE)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 25 February 2015 concerning maintenance of the European Patent No. 1939692 in amended form.**

Composition of the Board:

Chairman	W. Sieber
Members:	M. Ansorge
	D. Rogers

Summary of Facts and Submissions

I. This decision concerns the appeal lodged by the proprietor against the interlocutory decision of the opposition division that European patent no. 1 939 692 as amended met the requirements of the EPC.

II. With its notice of opposition, the opponent had requested revocation of the patent in its entirety on the basis of Article 100(a) EPC (lack of novelty and lack of inventive step) and Article 100(b) EPC.

III. The documents submitted during the opposition proceedings included:

D1: EP 1 916 568 A2
D2: EP 1 793 275 A2
D7: EP 1 705 522 A2
D8: US 6,365,330 B1.

IV. The opposition division held that the main request and auxiliary requests 1 to 5 were not allowable (the main request for insufficient disclosure), but that auxiliary request 6 met the requirements of the EPC.

V. The only relevant request for the present decision is the main request before the opposition division. Claim 1 of the main request (which corresponds to claim 1 as granted) reads as follows:

"A method for preparation of a lithographic printing plate comprising:

exposing with a laser a lithographic printing plate precursor comprising a support and a photosensitive layer containing a sensitizing dye, a radical

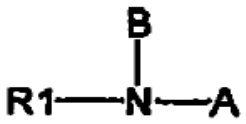
polymerization initiator, a radical polymerizable compound and a binder polymer, and

subjecting the exposed lithographic printing plate precursor to development processing with a developer having pH of from 3 to 9 to remove an unexposed area of the photosensitive layer,

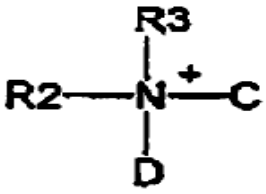
wherein the binder polymer is a polymer having an aliphatic hydroxy group or an aromatic hydroxy group and

the developer comprises a compound represented by one of the following formulae <1>, <2> and <3>:

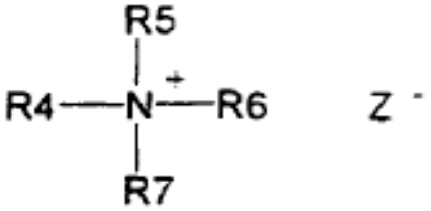
<1>



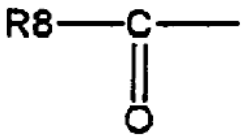
<2>



<3>



in the formula <1>, R1 represents a hydrogen atom, an alkyl group or a substituent having the following structure:



wherein R8 represents a hydrogen atom or an alkyl group; A represents a hydrogen atom, an alkyl group, a group containing an ethylene oxide group, a group containing a carboxylic acid group or a group containing a carboxylate; and B represents a group containing an ethylene oxide group, a group containing a carboxylic acid group or a group containing a carboxylate;

in the formula <2>, R2 and R3 each independently represents a hydrogen atom or an alkyl group, provided that at least one of the alkyl groups may have a substituent or a connecting group; C represents an alkyl group or a group containing an ethylene oxide group; and D represents a group containing a carboxylic acid anion or a group containing an oxide anion; and

in the formula <3>, R4, R5, R6 and R7 each independently represents a hydrogen atom or an alkyl group; and Z^- represents a counter anion."

Claims 2 to 9 of the main request correspond to claims 2 to 7, 12 and 13 as granted.

VI. In its statement setting out the grounds of appeal, the proprietor (hereinafter referred to as "the appellant") requested that the impugned decision be set aside and that the patent be maintained on the basis of the main

request (corresponding to the main request before the opposition division) or one of auxiliary requests 1 to 7 filed therewith.

VII. In its reply to the appeal dated 21 October 2015, the opponent requested that the appeal be dismissed. In said reply, a new inventive step attack starting from D2 as the closest prior art (including the new combination document D9) was submitted.

D9: Ullmann's Encyclopedia of Industrial Chemistry, fifth, completely revised edition, vol. A25 (1994), page 751.

VIII. In its letter dated 5 April 2016, the opponent withdrew its opposition and ceased to be a party to the proceedings.

IX. With its letter dated 22 April 2016, the appellant filed a response to the former opponent's reply including new auxiliary requests. It also requested that the new inventive step attack starting from D2 as the closest prior art (including the combination with D9) should not be admitted into the proceedings.

X. In preparation to the oral proceedings, the board issued a communication giving a preliminary opinion.

XI. With its letter dated 12 August 2019, the appellant filed a further submission in reaction to the preliminary opinion of the board, including a main request and auxiliary requests 1 to 5 (replacing all previously filed claim requests).

XII. On 12 September 2019, oral proceedings took place before the board. During the oral proceedings, the

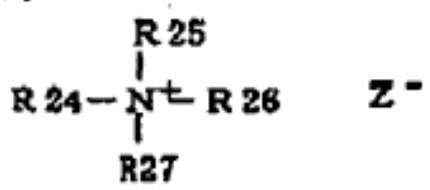
appellant filed a (new) **main request** which - except for correcting a typographical error in claim 1 (i.e. replacing "<3>" in line 10 by "<V>") - was identical to auxiliary request 1 as filed on 12 August 2019. All other auxiliary requests were withdrawn by the appellant.

XIII. Thus, the appellant's sole request is said **(new) main request**. Claim 1 of that request differs from claim 1 as granted in that:

- the binder polymer is contained in an amount in the range of 20 to 80% by weight, based on the total weight of the nonvolatile components of the photosensitive layer; and

- the ammonium salt of formula <3> including the definition of the residues thereof is replaced by the more specific alkylammonium salt of the following formula <V>:

(V)



including the definition "in the formula <V>, R24, R25, R26 and R27 each independently represents a hydrogen atom or an alkyl group, provided that the total number of carbon atoms included in R24 to R27 is from 10 to 30; and Z^- represents a counter anion."

Dependent claims 2 to 9 of the **main request** correspond to claims 2 to 7, 12 and 13 as granted.

XIV. The arguments of the appellant, insofar as relevant for the present decision, are as follows:

- Contrary to the decision of the opposition division, the invention can be carried out by a skilled person. No verifiable facts were submitted to support the sufficiency assertions. However, the burden of proof to show that there are serious doubts whether the invention can be carried out was on the former opponent's side.

- The subject-matter of claim 1 is novel in view of each of documents D1, D2 and D7, since none of the specific examples in D1, D2 and D7 discloses the combination of all the features of claim 1 and - insofar as the general content of those documents (without the examples) is concerned - a multiple selection would be necessary to arrive at the claimed process.

- Even when starting from D7 as the closest prior art (which was questioned by the appellant as an appropriate starting document), the claimed process involves an inventive step in view of D7, even when taken in combination with D8.

- The new inventive step attack starting from D2 should not be admitted into the proceedings, since it was only filed in the appeal stage and merely a vague argumentation line was submitted which did not apply the problem and solution approach.

XV. The arguments of the former opponent, insofar as relevant for the present decision, are as follows:

- As correctly decided by the opposition division, the invention cannot be carried out by a skilled person over the whole claimed range, since it is very unlikely that all compounds falling within the scope of formula <2>, wherein D is a group containing an oxide anion, would solve the technical problem underlying the patent. Although in the description of the patent the compounds of formulae <1>, <2> and <3> are mentioned as being surfactants, in claim 1 they are not limited to surfactants and for instance even include simple ammonium salts such as NH_4Cl (formula <3>) which cannot act as a surfactant.

- The subject-matter of claim 1 lacks novelty in view of the whole content of documents D1, D2 and D7 and in view of example 5 of D7.

- The subject-matter of claim 1 does not involve an inventive step in view of D7 as the closest prior art in combination with D8; or in view of D2 in combination with D9 insofar as those embodiments of claim 1 are concerned which do not validly claim the first priority of the patent.

Reasons for the Decision

MAIN REQUEST (filed during the oral proceedings before the board on 12 September 2019)

1. Amendments

Claim 1 of the main request differs from claim 1 as granted in that:

- the amount of the binder polymer was specified to be in the range of 20 to 80% by weight, based on the total weight of the nonvolatile components of the photosensitive layer; and

- the ammonium salt of the formula <3> (as a component of the developer) was replaced by the more specific alkylammonium salt of formula <V>.

The board is satisfied that claim 1 meets the requirement of Article 123(2) EPC, since the limitation with respect to the amount of the binder polymer (20 to 80% by weight) is explicitly disclosed on page 47, lines 1 to 3, of the application as filed, and the restriction to formula <V> (including the definition of groups R24 to R27) is unequivocally disclosed on page 123, last formula on said page, in combination with page 136, lines 1 to 10, of the application as filed.

2. Sufficiency

2.1 The former opponent had two objections with regard to sufficiency.

2.2 The first one was based on the assertion that it was very unlikely that all compounds falling within the scope of formula <2>, wherein D is a group containing an oxide anion, would solve the technical problem underlying the patent. This objection was in line with the opposition division's negative finding on sufficiency of the then main request regarding the feature "a group containing an oxide anion" (group D in formula <2>). However, neither the decision under appeal nor the former opponent supplemented said assertion by any verifiable facts to show that the claimed method indeed could not be carried out with a developer having a compound falling within formula <2>. Therefore, the board cannot follow the opposition division or the former opponent as regards this first objection.

2.3 As regards the second sufficiency objection the former opponent objected that in the description of the patent the compounds of formulae <1>, <2>, <3> and <V> (now required in the main request) were referred to as surfactants. However, some of the compounds embraced by said formulae of claim 1 did not have any surface-active properties and could not produce the technical effects envisaged by the opposed patent (no stain in the non-image areas).

Claim 1 of the main request requires that the developer comprises a compound represented by one of formulae <1>, <2> or <V>. The board concedes that these compounds are also referred to as surfactants in the patent specification. However, it is not decisive what name is given to the compounds in the patent specification, decisive is whether or not the compounds falling within the scope of formulae <1>, <2> or <V>

can be successfully applied in the claimed process. Despite the fact that the patent exemplifies numerous compounds of formula <1> or <2>, the former opponent did not show that some of the compounds falling within the formulae <1> and <2> could not be successfully applied in the claimed method. Thus, in the absence of any verifiable facts, this sufficiency objection is merely based on assertions, so that the board cannot follow this sufficiency attack.

In view of the limitation to the specific alkylammonium salt having a total number of carbon atoms of 10 to 30 (formula <V>) in claim 1, the objection against formula <3> became meaningless. There is simply nothing on file that compounds falling within formula <V> could not be successfully applied in the claimed method.

In view of the above, the board sees no reason as to why the invention cannot be carried out over the whole claimed range. Consequently, the ground of opposition under Article 100(b) EPC does not prejudice the maintenance of the opposed patent.

3. Novelty

3.1 Novelty objections against the claimed subject-matter were raised by the former opponent in view of documents D1, D2 and D7 (in particular example 5).

3.2 While the board had concerns whether the method according to claim 1 as granted was novel in view of example 5 of D7 (insofar as formula <3> was concerned), the now claimed method is clearly delimited from said example 5 due to the limitation to the alkylammonium salt of the formula <V> which clearly excludes the

formerly encompassed primary ammonium phosphate (falling within the formula <3>).

As to the general content of D7, multiple selections would be necessary with respect to the selection of an aliphatic hydroxy group or aromatic hydroxy group containing binder polymer in an amount of 20 to 80% by weight, and the selection of a compound of formula <1>, <2> or <V> in order to arrive at an embodiment falling within the scope of claim 1. Thus, the general content of D7 does not disclose the combination of all the features of method claim 1.

3.3 D1 and D2 likewise fail to directly and unambiguously disclose a method having all the features of claim 1 in combination. Again multiple selections would be necessary in D1 and D2 to arrive at the claimed subject-matter.

Thus, the subject-matter of claim 1 of the main request is novel in view of D1, D2 and D7. The same applies *mutatis mutandis* to the subject-matter of dependent claims 2 to 9.

4. Inventive step

4.1 The former opponent provided two lines of arguments with respect to lack of inventive step, one starting from D7 as the closest prior art in combination with D8 (as already submitted in the opposition proceedings); and one starting from D2 as the closest prior art in combination with D9 (for those embodiments of claim 1 allegedly not validly claiming the first priority date of the opposed patent).

4.2 Said latter attack was submitted for the first time in appeal with the reply to the statement setting out the grounds of appeal. The appellant requested not to admit said new attack into the proceedings.

In this context, the board shares the appellant's view that D2 was in the proceedings for a long time and such an objection could have been brought forward much earlier, i.e. already in the opposition proceedings. In addition, said inventive step attack is rather vague which makes it difficult for the board to understand the thrust of the former opponent's arguments. It is not the task of the board to make the former opponent's case and to try to find on its own a possibly successful new inventive step attack. Furthermore, D2 has a publication date between the first and second priority date claimed by the opposed patent. Thus, D2 could only be used as prior art pursuant to Article 54(2) EPC for those embodiments of claim 1 of the main request which do not validly claim the first priority. Thus, said attack substantially depends on a rather complex assessment of the priority situation, an issue arising at a rather late stage in the proceedings.

In view of the above circumstances, the attack starting from D2 as the closest prior art (including D9 as the combination document) was not admitted into the proceedings (Article 12(4) RPBA).

4.3 The remaining inventive step attack is the one starting from D7 as the closest prior art. In this context, the appellant submitted that D7 is not an appropriate closest prior-art document but did not provide any better starting document. The board is aware of the fact that the technical problem mentioned in D7 differs

from the problem mentioned in the opposed patent. However, D7 and the opposed patent are considered to relate to the same technical field of preparing a lithographic printing plate. In addition, the plate-making method of D7 has many features in common with the method according to claim 1 of the main request. Consequently, D7 is not so remote from the invention that it could be unsuitable as the closest prior art. Thus, in the absence of a more relevant document, the question of inventive step is to be assessed starting from D7 as the closest prior-art document.

4.4 Example 5 of D7 in particular discloses a process for producing a lithographic printing plate comprising the steps of coating a photosensitive layer onto a support, exposing said plate precursor with a laser and developing it with a developer comprising, amongst others, ammonium primary phosphate (see Table 2 of D7). However, said example does not disclose a developer comprising a compound of one of the formulae <1>, <2> and <V>. In addition, example 5 does not contain a binder polymer (containing an aliphatic hydroxy group or aromatic hydroxy group) in an amount of 20 to 80% by weight. PVA-205 (i.e. a polyvinyl alcohol; see paragraph [0374] of D7) is only present as a minor component (about 3.5 wt%) as part of microcapsules in the photosensitive layer.

Examples 22, 28 and 34 of the application as filed use a lithographic printing plate precursor including the required high amount of the binder polymer in the photosensitive layer (in line with claim 1) and a compound of the formula <1>, <2> or <V> in the developer according to claim 1 (example 22 uses a compound of formula <1>; example 28 uses a compound of formula <2>; and example 34 uses a compound of

formula <V>) in the preparation of a lithographic printing plate. When carrying out a method having all required features of claim 1 - as in said examples 22, 28 and 34 - no residue of the photosensitive layer remains, a good developing property is achieved and no ink stain occurs in the non-image area. Thus, it has been shown in said examples that using the specific binder polymer in the required high amounts in combination with a developer comprising a compound of the formulae <1>, <2> or <V> leads to the above identified advantageous properties resulting from the distinguishing features in view of D7.

In view of the above, the objective technical problem is seen in providing a method for preparing a lithographic printing plate exhibiting good developing property without residue of the photosensitive layer, wherein no ink stain occurs in the non-image area.

It is self-evident from the above that said objective technical problem has been solved.

There is simply no teaching in D7 itself which could provide any guidance for a skilled person that the above objective technical problem could be solved by selecting the above-mentioned distinguishing features. D7 is rather concerned with the provision of a method of producing a lithographic printing plate allowing to write by a blue laser and being capable of achieving a printing plate where a high-quality halftone dot of an FM screen can be stably obtained. However, it gives no hint concerning those measures which are necessary to achieve the above-mentioned improved developing property and printing image-forming property.

Also no other document teaches as to how the objective technical problem could be solved. In particular, D8 is focused on a developer having a pH of at least 11 (i.e. highly alkaline conditions; see claim 4 and col. 3, lines 32 and 33, of D8). However, claim 1 of the main request requires a developer having a pH of from 3 to 9 (designated by the appellant as "near-neutral"), which is significantly remote from the preferred high alkaline pH range taught in D8. Thus, a skilled person would not combine the teaching of D7 with D8. Even when considering the teaching of D8, a skilled person would not expect that the objective technical problem could be solved by applying the surfactants disclosed in D8 also at the significantly lower pH conditions.

Thus, the subject-matter of claim 1 of the main request involves an inventive step in view of D7 as the closest prior art (even when taken in combination with D8). The same applies *mutatis mutandis* to dependent claims 2 to 9 of the main request.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the opposition division with the order to maintain the patent with the following claims and a description to be adapted thereto:

Claims 1 to 9 of the main request (filed during the oral proceedings before the board on 12 September 2019).

The Registrar: The Chairman:

B. Atienza Vivancos W. Sieber

Decision electronically authenticated