BESCHWERDEKAMMERN DES EUROPÄISCHEN PATENTAMTS

BOARDS OF APPEAL OF THE EUROPEAN PATENT OFFICE

CHAMBRES DE RECOURS DE L'OFFICE EUROPEEN DES BREVETS

Publication in the Official Journal ~~Yes~~ / No

File Number: T 365/89 - 3.3.1

Application No.: 83 304 992.7

Publication No.: 0 102 821

Title of invention: Silver halide color photographic light-sensitive material

Classification: G03C 7/34

D E C I S I O N
of 10 April 1991

Applicant: KONICA CORPORATION

Opponent: Agfa-Gevaert AG, Leverkusen

Headword: Photographic material/KONICA

EPC Articles 54(1), 54(3), 56

Keyword: "Main request, novelty (no)" - "The mere indication of one from a number of alternatives belonging to the state of the art is not a true selection (reasons No. 4.1.3)" - "Auxiliary request, novelty (yes), new feature not unambiguously belonging to the state of the art" - "Inventive step (yes), non-obvious alternative"

Headnote

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number : T 365/89 - 3.3.1

D E C I S I O N
of the Technical Board of Appeal 3.3.1
of 10 April 1991

Appellant : (Opponent)
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Decision under appeal :
Decision of Opposition Division of the European Patent Office dated 10.03.1989, posted on 29.05.1989 rejecting the opposition filed against European patent No. 9 102 821 pursuant to Article 102(2) EPC.

Composition of the Board :

Chairman : R. Spangenberg
Members : P. Krasa
J.A. Stephens-Ofner

Summary of Facts and Submissions

I. This appeal lies from the decision of the Opposition Division of the EPO dated 10 March 1989, with written reasons posted on 29 May 1989, rejecting an opposition against European patent No. 102 821, granted for DE, FR, GB and IT based on European patent application No. 83 304 992.7 filed on 30 August 1983 and claiming priority of 30 August 1982 of an earlier application in Japan. The decision under appeal was based upon the patent as granted, comprising 25 claims, the only independent Claim 1 reading as follows:

"A silver halide color photographic light-sensitive material comprising a support having thereon at least one light-sensitive silver halide emulsion layer containing a phenol type cyan coupler, characterised in that said phenol-type cyan coupler has in the 2-position of the benzene nucleus a group selected from a phenylureido group, a naphthyl ureido group and a heterocyclic ureido group, and having in the 5-position an acylamino group, and the same or another light-sensitive silver halide emulsion layer contains a naphthol-type cyan coupler which is substantially colorless and has at a coupling position a hydrogen atom or a group capable of splitting off a compound which does not inhibit the development of color by a coupling reaction with an oxidised product of an aromatic primary amine color developing agent."

Among the 9 documents considered, the following remained relevant during the appeal proceedings:

(6) EP-A-0 084 100 (published 22 July 1983, Designated States DE, FR, GB, claimed priority: 7 December 1981)

(8) EP-A-0 087 931 (published 7 September 1983, Designated States DE, FR, GB, IT, claimed priority: 25 February 1982, and

(9) foto-contact 3/82, pages 10 to 16 in combination with the "KODACOLOR HR disc film".

The Opposition Division held that the claimed subject-matter was novel since documents (6) and (8) did not mention naphthol-type couplers in detail. The problem underlying the patent in suit was seen in providing a silver halide colour photographic material with restrained change of $lambda_{max}$ of the cyan dyes whose absorption is in a sufficiently long wavelength portion in either a higher density area or a lower density area, and which is little or not discoloured in the bleaching or bleach-fixing process. The cited documents belonging to the state of the art as defined in Article 54(2) EPC did not provide an incentive to solve the above problem by selecting the types of couplers specified in the patent in suit.
In particular the analysis of the KODACOLOR HR disc film mentioned in document (9) would not have revealed the way to modify this film in order to obtain a similar material with comparably good performance. More specifically the replacement of the DIR-coupler by a colourless naphthol-type coupler without a DIR-group was not obvious. The comparative tests relied upon by the Opponent were disregarded since they were not performed with realistic amounts of couplers.

II. The appeal was filed on 8 June 1989 and the appropriate fee was paid on the same date. It was accompanied by a statement of grounds of appeal in which reference was made to additional documents (10) to (24), all being cited in documents (6) and (8). Among these documents the following is of particular importance:

(12) US-A-2 474 293.

The Appellant also referred to Japanese patent applications (26) to (30) cited in document (6) and to

(31) DE-A-2 530 645

representing the common general knowledge in the technical field concerned.

On 15 January 1991 the Respondent filed as an auxiliary request a new set of 24 claims, Claim 1 of which combined the features of Claims 1 and 18 as granted. Thus, the amended Claim 1 corresponds to Claim 1 as granted, with the addition, at its end, of the words "said naphthol-type cyan coupler being present in said layer in an amount of 0,15 to 0,5 mole per mole of silver halide in said layer."

Oral proceedings took place on 10 April 1991. In the course of these proceedings the Respondent submitted two further sets of claims as auxiliary requests Nos 2 and 3, claims 1 of which combined the features of granted claims 1 and 21 and 1, 18 and 21, respectively.

III. The Appellant's submissions can be summarised as follows:

Regarding novelty, the decision under appeal wrongly considered only the specific disclosure of documents (6) and (8), and failed to take proper account of the general teachings contained in them. In particular, document (6) distinguished coloured and DIR-group containing cyan couplers from all other cyan couplers, i.e. those to be used according to the patent in suit, and therefore unambiguously disclosed the use of these couplers together with the phenol-type cyan couplers according to Claim 1 of that document, which belong to the group of phenol-type

cyan couplers defined in Claim 1 of the patent in suit. Moreover, the list of patent documents (10) to (24) was referred to in documents (6) and (8) in the context of additional couplers. Among these patents were some, e.g. document (12), which related to couplers falling within the definition of the naphthol-type couplers according to the patent in suit. Since it was not disputed that document (8) as well as document (6) disclosed phenol-type couplers of the type referred to in the patent in suit, the subject-matter of Claim 1 lacked novelty.

Since document (8) also disclosed ranges of amounts of couplers overlapping with those according to the first auxiliary request. Claim 1 of this request, too, did not relate to novel subject-matter. The novelty of the subject-matter of the further auxiliary requests was not disputed.

Regarding inventive step, document (9) and the KODACOLOR HR disc film to which it related were clearly suggesting to a person skilled in the art how to obtain a similar material with properties similar to that of the patent in suit, since the function of the various constituents of this known film were common general knowledge and it was, therefore, obvious that the advantageous properties of this film were caused by the couplers used in it. In particular, the spectral properties were only related to the dyes produced from the said couplers and it was therefore obvious that they would be retained if the DIR-coupler in the KODACOLOR HR disc film was replaced by a normal naphthol-type coupler producing the same dye. In principle, the patent in suit only proposed to add a further naphthol-type cyan coupler to those present in the known film. It was not disputed by the Respondent that this additional feature did not result in any improvement, since the known combination of cyan couplers already

solved the problem of avoiding the undesirable change of $lambda_{max}$ at different colour densities. In the light of these facts the selection of certain amounts of the maphthol-type coupler and its presence in different layers was merely the result of routine and, therefore, non-inventive considerations. Thus, neither of the claims 1 of the various requests related to inventive subject-matter.

IV. In the Respondent's submission, when starting from documents (6) or (8) several distinct choices, amounting to true selection, were necessary in order to arrive at the subject-matter of the patent in suit, since one had to decide to use more than one cyan coupler, then only one not having a coloured or development-inhibiting moiety and not being a phenol coupler. Only after having taken these steps could one select an appropriate coupler from the list of references. Thus, the claimed subject-matter was not unambiguously disclosed and novelty should be acknowledged.

The amounts of couplers mentioned in document (8) related to the total amount of all couplers in one layer and not to a particular group of colourless naphthol-type couplers. Thus, the Appellant's objection against the novelty of the subject-matter of the first auxiliary request was unfounded.

With respect to inventive step it was submitted that the various components of a photographic material interact with one another in a rather unpredictable manner and it was therefore not obvious to modify the known film in the way claimed by the patent in suit. This was demonstrated by the surprising effect of combining the two different types of couplers identified in Claim 1.

The analysis of the known film would only have revealed its composition, but not necessarily its property of avoiding the shift of $lambda_{max}$ in relation to colour density. This effect was therefore not made available to the public, and certainly there was no technical teaching how this effect had been obtained and how similar materials having the same advantageous property could be made.

V. The Appellant requested that the decision under appeal be set aside and the patent revoked.

The Respondent requested that the appeal be dismissed and the patent maintained as granted (main request) or on the basis of auxiliary request No. 1 submitted on 15 January 1991 or on the bases of any one of the further auxiliary requests submitted in the course of the oral proceedings.

As the end of the oral proceedings the decision of the Board was announced to set aside the decision under appeal.

Reasons for the Decision

1. Having regard to the facts stated in paragraphs I and II above the appeal is admissible.

2. Documents (10) to (30) referred to by the Appellant during the Appeal proceedings are references cited in documents (6) or (8) respectively, and form part of the disclosure of these documents.

Document (31) is in the Board's judgment no more relevant than the state of the art represented by document (9) and the KODACOLOR HR disc film cited therein. Since it was mentioned for the first time after the expiry of the

opposition period the Board disregards it in the exercise of its discretion under Article 114(2) EPC.

3. No objection under Article 123 EPC arises against the amendments made in the claims of auxiliary requests Nos 1 to 3 since they are all based on the text of the claims as originally filed and granted.

4. Main request

4.1 Novelty

4.1.1 There is no dispute that documents (6) to (8) belong to the state of the art according to Article 54(3) and (4) EPC (document (6) not for Italy). It is also not disputed that these documents relate to phenolic couplers of the type specified in Claim 1 of the patent in suit.

Document (6) additionally contains the following statement:

"Photographic emulsions produced using the coupler of the present invention may contain colour image-forming couplers other than couplers of the present invention. Examples of some preferred couplers which can be used with couplers of the invention include non-diffusible couplers having a hydrophobic group called a ballast group in the molecule. The couplers may be any of the four-equivalent type ones or two-equivalent type ones with respect to silver ions. Further, the emulsion may contain coloured couplers which have the effect of colour correction or couplers which release a development inhibitor during development (the so-called DIR coupler)" (page 11, line 15 to page 12, line 1).

On pages 12 and 13 these other couplers are described in more detail by reference to other patent documents. After so describing suitable yellow and magenta couplers additional cyan couplers are mentioned. The listed patents describing such useful additional cyan couplers contain various couplers of the phenol- and the naphthol-type, some of them being coloured or contain development inhibiting groups. In particular document (12), belonging to these patents, describes only naphthol-type couplers falling within the definition of Claims 1 and 2 of the patent in suit. Separate lists of preferred coloured couplers and DIR-couplers follow. Therefore, document (6) provides a clear and unambiguous teaching to combine phenol type couplers (see Claim 1 and page 3, lines 6 to 17) fulfilling the definitions of Claim 1 of the patent in suit with colourless naphthol-type couplers not containing a DIR-group, in particular those disclosed in document (12).

4.1.2 Essentially the same information is contained in document (8) with respect to another group of phenol-type couplers falling within the definition of Claims 1 to 9 of the patent in suit, see Claims 1 to 7 in combination with the description, page 22, lines 1 to 10 and page 23, lines 6 to 14, where essentially the same list of references appears as in document (6).

4.1.3 In the Board's judgment a true selection from a broad technical disclosure must add a new element to the state of the art (see Decision T 12/90 of 23 August 1990, paragraph 2.6 of the reasons). The mere indication of one from several alternatives disclosed in a document belonging to the state of the art is no more than a repetition of what already belongs to the state of the art and cannot, therefore, be patented again (see Decision T 124/87, OJ EPO 1989, 491, paragraph 3.2 of the reasons). Claim 1 as granted, however, does not require any new

feature in addition to those already disclosed in the same combination as one of a number of alternatives in documents (6) and (8).

4.1.4 Article 54(1) EPC does not require that a technical teaching must be disclosed in detail, e.g. by working examples. Thus, the presence or absence of such more detailed information does not influence the answer to the question whether or not the relevant disclosure in documents (6) and (8) belongs to the state of the art. Therefore, Claim 1 as granted does not relate to novel subject-matter. For this reason the main request must fail.

5. First auxiliary request

5.1 Novelty

5.1.1 Claim 1 according to this request contains as an additional technical feature the range of concentration of the colourless naphthol-type coupler. In the Appellant's submission this range of concentrations is disclosed in document (8), page 23, lines 15 to 20. However, the Board cannot find an unambiguous disclosure of the concentration of the colourless naphthol-type couplers in this paragraph, where it is merely stated that two or more of "the above couplers" may be contained in the same layer and that the same compound may be present in two or more layers and that these couplers may be added in certain amounts, which happen to overlap with those cited in Claim 1 of the patent in suit.

In the paragraph immediately preceding the cited one the "other cyan colour forming couplers" already mentioned in paragraph 4.1.1 above are listed. However, in the Board's judgment, the expression "the above couplers" does not

only relate to these "other cyan colour forming couplers" but refers to all other couplers mentioned on the preceding pages of document (8), i.e. also to the phenol-type cyan couplers claimed in that document. Therefore, document (8) does not provide an unambiguous technical information about the suitable concentration of the couplers of e.g. document (12) taken separately. This feature in Claim 1 under consideration adds, therefore, the new element required for establishing novelty and missing from Claim 1 as granted.

5.1.2 The Board is satisfied that none of the other cited documents disclose all features of the present Claim 1. Since this was not disputed by the Appellant no detailed explanation of this finding is required.

The set of claims according to this request therefore relates to novel subject-matter.

5.2 Inventive step

5.2.1 When considering the question of inventive step, documents (6) and (8) must be disregarded according to Article 56 EPC, second sentence, since they form part of the state of the art as defined in Article 54(3) EPC.

5.2.2 According to the patent in suit, it was known that ureido group containing phenol-type cyan couplers, e.g. those known from JP-A-65134/1981 /equivalent to EP-A-28 099), had good stability in the bleaching or bleach fixing process, but still had not sufficient absorption at their maximum absorption wavelength (page 2, lines 41 to 45). Additionally it is stated in the patent in suit that is has been found that in cyan dyes formed from such couplers the maximum wavelength of absorption shifts with increasing colour density, thus resulting in a more bluish

colour at low density and thereby hindering the true reproduction of colour (page 2, lines 50 to 57).

5.2.3 There is no evidence before the Board that this specific disadvantage was known to those skilled in the art before the priority date of the patent in suit. Thus, even if it could be accepted that as soon as the KODACOLOR HR disc film was made available to the public, all its properties also became available, there is no evidence before the Board that a skilled person would have realised that this film overcame the above-mentioned disadvantages. In any case, the commercial availability of the KODACOLOR HR disc film and the possible recognizability, through chemical analysis, of its constituents, did not make available to the public that the specific combination of these constituents was responsible for overcoming the aforesaid disadvantages.

For this reason the Board holds that neither document (9) nor the KODACOLOR HR disc film to which it relates represents a part of the state of the art which is closer to the subject-matter of the patent in suit than the state of the art already acknowledged by it.

5.2.4 The technical problem which the patent in suit sets out to solve can therefore be seen in improving the spectral properties of photographic elements containing the phenol-type cyan couplers having the specific substituents in position 2 and 5 of the phenyl ring indicated in Claim 1. The patent in suit contains test results comparing the change of the absorption maximum with image density for a number of coupler combinations according to the patent in suit with known couplers or coupler combinations not claimed in the patent in suit(see Examples 1 and 2). These test results demonstrate that the above problem has been effectively solved.

The proposed solution of this problem is to add to the respective photographic elements certain amounts of an additional cyan coupler of the naphthol-type which is substantially colourless and does not contain development inhibiting groups.

5.2.6 As already stated in paragraph 5.2.3 above the problem of the shifting of $lambda_{max}$ was not adressed in any of the cited documents available to the public before the priority date of the patent in suit. Nor could any hint as to the way to improve the known photographic materials in this respect therefore be found in them.

In addition, the analysis of the KODACOLOR HR disc film could only reveal its composition, but not the reason for chosing the specific combination of cyan couplers. Moreover, even if the Board could have accepted the Appellant's submission that the analysis of this film would have shown the improved spectral reproducibility at different colour densities, this would not have provided any guidance as to how to modify the composition of the film without adversely affecting its advantageous properties. More particularly, the Appellant's submission that a person skilled in the art would have seen that these properties were caused by the specific combination of cyan dyes being produced from the respective phenol- and naphthol-type cyan couplers and that, therefore, the naphthol-type coupler may contain any conventional coupling-off group is, in the Board's judgment, based on hindsight. While it is clear that any improvement relating to the cyan region of the spectrum will most probably be caused by a modification of the composition of the respective light sensitive layer or layers, it is not at all clear that in the present case the combination of naphthol- and phenol-type couplers is responsible for it.

The KODACOLOR HR disc film contains a phenol-type coupler which was not previously used in a commercial product, together with a known DIR-coupler and a known coloured coupler. Thus the skilled person would more likely be led to the conclusion that the new phenol-type coupler is responsible for any improvement, than to the conclusion that he needed to modify the conventional part of the product, e.g. by adding substantial amounts of an additional naphthol-type coupler.

5.2.7 Technical progress is not a requirement of patentability according to Article 52(1) EPC. Therefore, the question whether or not the above-mentioned technical problem was also solved by a different approach, e.g. as that embodied in the KODACOLOR HR disc film, or could, according to the test results submitted by the Appellant during the opposition proceedings, also be solved by the addition of high amounts of a coloured naphthol-type coupler is therefore not relevant to deciding the issue of inventive step.

5.2.8 Therefore, the Appellant's submissions do not demonstrate the obviousness of the claimed subject-matter and the patent can be maintained on the basis of the amended Claim 1.

5.2.9 The dependent Claims 2 to 25 derive their patentability from that of Claim 1.

6. Since the first auxiliary request can be allowed, there is no need to consider the other auxiliary requests further.

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 on the basis of auxiliary request No. 1 with consequential amendments to the description.**

The Registrar

E. Görgmaier

The Chairman

R. Spangenberg