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D E C I S I O N
of 12 October 2004

Case Number: T 0144/02 - 3.2.5

Application Number: 94925547.5

Publication Number: 0716634

IPC: B41M 5/165

Language of the proceedings: EN

Title of invention:
Pressure-sensitive record materials

Patentee:
Carrs Products Limited

Opponent:
Arjo Wiggins Limited

Headword:
-

Relevant legal provisions:
EPC Art. 54, 56

Keyword:
"Novelty (main request, no)"
"Inventive step (first to third auxiliary requests, no)"

Decisions cited:
T 0718/98, T 0464/94

Catchword:
-

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Case Number: T 0144/02 - 3.2.5

D E C I S I O N
of the Technical Board of Appeal 3.2.5
of 12 October 2004

Appellant: (Opponent)
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Decision under appeal: **Decision of the Opposition Division of the European Patent Office posted 9 January 2002 rejecting the opposition filed against European patent No. 0716634 pursuant to Article 102(2) EPC.**

Composition of the Board:

Chairman: W. Moser
Members: P. E. Michel
H. M. Schram

Summary of Facts and Submissions

I. The appellant (opponent) lodged an appeal against the decision of the Opposition Division rejecting the opposition filed against European Patent No. 0 716 634.

The Opposition Division held that the subject-matter of claims 1, 3, 7 and 10 as granted was novel and involved an inventive step.

II. Oral proceedings were held before the Board of Appeal on 12 October 2004.

III. The appellant requested that the decision under appeal be set aside and that the European Patent No. 0 716 634 be revoked.

The respondent (patentee) requested as a main request that the appeal be dismissed. Alternatively, he requested that the decision under appeal be set aside and that the patent be maintained on the basis of the following documents:

(i) claims 1 to 7 filed as first auxiliary request on 20 November 2002; or

(ii) claims 1 to 7 filed as second auxiliary request on 20 November 2002; or

(iii) claims 1 to 4 presented as third auxiliary request during oral proceedings.

IV. The following documents are referred to in the present decision:

D1: JP-A-50-90409 and English translation thereof

D4: Declaration of Dr Hobson of 27 August 2004

V. Claims 1, 3, 7 and 10 of the main request read as follows:

"1. A composition, for use as the internal phase of a coating of rupturable material for application to a base sheet to form a pressure-sensitive record material, the composition comprising one or more colour-formers of which at least 90% comprise one or more of the following amino fluorans,
2'-(octylamino)-6'-(diethylamino)fluoran,
2'-anilino-3'-methyl-6'(diethylamino)fluoran,
6'(diethylamino)-2'-(1,1-dimethylethyl)fluoran,
6'-(dibutylamino)-3'-methyl-2'-(phenylamino)-spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one,
dissolved in a solvent comprising 80% to 100% of one or more vegetable and/or animal oils."

"3. A method of manufacturing a pressure-sensitive record material of the kind comprising a base sheet coated with a rupturable material confining droplets of a solution of one or more colour-formers characterised in that at least 90% of said colour-formers are monoamino and/or diamino fluoran derivatives, and said colour-formers are dissolved in a solvent comprising 80% to 100% of an animal or vegetable oil, dissolution of said colour-formers being carried at a temperature above 100°C."

"7. A pressure-sensitive record material comprising a base sheet coated with a rupturable material confining droplets of an internal phase comprising one or more colour-formers of which at least 90% are monoamino and/or diamino fluoran derivatives, dissolved in a solvent comprising 80% to 100% of one or more vegetable and/or animal oils."

"10. A method of forming micro-capsules containing a solution of colour-formers in an organic solvent by coacervation, characterised in that at least 90% of said colour-formers comprise monoamino and/or diamino fluoran derivatives, dissolved at a temperature in excess of 100°C in a solvent comprising 80% to 100% of one or more vegetable and/or animal oils to form an internal phase solution which is subsequently subject to coacervation at a temperature below 70°C."

Claim 1 of the first auxiliary request is identical to claim 1 of the main request. Independent claims 3, 5 and 7 of the first auxiliary request differ from the corresponding claims 3, 7 and 10 of the main request in that all of the amino fluorans are restricted to the four amino fluorans specified in claim 1 of the main request and in that the temperature of dissolution specified in claims 3, 5 and 7 is restricted to a maximum of 135°C.

The claims of the second auxiliary request differ from the claims of the first auxiliary request in that claim 1 includes the additional feature of:

"dissolution of said colour-formers being carried at a temperature above 100°C and up to 135°C."

Claim 1 of the third auxiliary request reads as follows:

"1. A composition, for use as the internal phase of a coating of rupturable material for application to a base sheet to form a pressure-sensitive record material, the composition comprising the following amino fluoran colour-formers, in the following weight proportions:, 65% 2'-(octylamino)-6'-(diethylamino) fluoran, 20% 2'-anilino-3'-methyl-6'(diethylamino) fluoran, 7.5% 6'(diethylamino)-2'-(1,1-dimethylethyl) fluoran, 7.5% 6'-(dibutylamino)-3'-methyl-2'-(phenylamino)-spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one, dissolved in a deodorized refined rape seed oil solvent, dissolution of said colour-formers being carried at a temperature above 100°C and up to 135°C."

VI. The appellant has argued substantially as follows in the written and oral proceedings:

The evidence from Dr Hobson was filed more than one month before the oral proceedings in response to the provisional opinion of the Board as set out in the summons to attend oral proceedings and should be admitted in view of its relevance.

The subject-matter of claims 3 and 7 of the main request lacks novelty in view of the disclosure of document D1, referring in particular to claim 1 and the description at pages 6 and 7. The absence of emphasis on the use of amino fluorans is not relevant to the question of novelty.

The subject-matter of claims 1 and 3 of the first auxiliary request does not involve an inventive step. The selection of the four specified amino fluorans could only involve an inventive step if the selection gave rise to an unexpected technical effect. This is, however, not the case. No comparative data have been supplied and the claims merely relate to an arbitrary selection. The experiments of Dr Hobson show that the claimed fluorans, other fluorans and non-fluorans all give comparable results when dissolved in soybean or rape seed oil.

If the reference to "a deodorized refined rape seed oil solvent" is construed as including solvents in which the proportion of rape seed oil is not specified, the amendments to claim 1 of the third auxiliary request do not comply with the requirements of Article 123(2) and (3) EPC.

The subject-matter of claim 1 of the third auxiliary request does not involve an inventive step for similar reasons to those put forward in respect of the first auxiliary request, that is, that the selection of a particular combination of amino fluorans does not give rise to an unexpected technical effect.

VII. The respondent has argued substantially as follows in the written and oral proceedings:

The evidence in the form of experiments carried out by Dr Hobson was late filed and should not be admitted into the proceedings. The delay in filing the evidence

is inexcusable and is greater than that which occurred in case T 718/98.

The subject-matter of claims 3 and 7 of the main request is novel. Document D1 must be read as a whole and, when read as a whole, is ambiguous. The description includes a list of solvents and a list of colour formers. There is nothing to suggest the selection of solvent, colour former and dissolution temperature specified in the claims. The only Example in document D1 in which an amino fluoran is present is Example 3, which uses a mixture of colour formers, 12.5% of which is an amino fluoran. According to decision T 464/94, the patentee must be given the benefit of the doubt when considering novelty in view of an ambiguous document. Thus, insofar as there is a teaching in document D1 to use amino fluorans, the teaching is to use a small proportion as in Example 3.

A claim which specified that at least 90% of the colour-formers are monoamino and/or diamino fluoran derivatives, and that the colour-formers are dissolved in a solvent comprising 80% to 100% of an animal or vegetable oil would go beyond the disclosure of document D1. Since the test for compliance with the requirement of Article 123(2) EPC is the same as that for novelty, the subject-matter of claims 3 and 7 must be novel in view of the disclosure of document D1.

The subject-matter of claims 1 and 3 of the first auxiliary request involves an inventive step. A suitable colour former must have good solubility and must remain in solution both when the temperature is lowered to enable coacervation to take place and during

storage of manufactured sheets. The colour formers of the present invention have a long shelf life, whilst document D1 does not mention shelf life. The prior art thus does not give any hint of a product having a satisfactory shelf life.

The present invention was the result of much work and has enjoyed commercial success. Evidence is available of customer satisfaction.

The application as filed discloses the use of deodorized refined rape seed oil at page 8, lines 15 and 16. The amendments made to claim 1 of the third auxiliary request thus comply with the requirement of Article 123(2) EPC.

The subject-matter of claim 1 of the third auxiliary request involves an inventive step. From the sentence at page 6, lines 50 and 51 of the patent in suit, it is evident that the materials of Example 3 lead to a good shelf life.

Reasons for the Decision

1. *Admissibility of evidence*

The respondent objected to the admission of the Declaration of Dr Hobson into the proceedings. In particular, reference was made to the decision in case T 718/98. In this case, evidence, which could have been filed much earlier, was filed one week before the oral proceedings and the late introduction was regarded by

the then competent board as being a strategic measure which amounted to an abuse of the proceedings.

This is not the present case. The evidence was filed in response to a provisional opinion of the Board, issued with the summons to oral proceedings, and indicating that any further submissions should be filed at least one month before the date set for oral proceedings. The Declaration of Dr Hobson was filed more than one month before the date set for oral proceedings and is regarded as being in response to the provisional opinion of the Board, which indicated that the claims of the first auxiliary request appeared to involve an inventive step.

The evidence is the only evidence available to the Board concerning the question of whether or not the selection of the compounds specified in the claims of the first auxiliary request gives rise to an unexpected effect. It is therefore considered appropriate to admit the evidence into the proceedings.

2. *Main Request*

2.1 Novelty of claims 3 and 7

As set out in the sole claim of document D1 (page 2 of the English translation), this document relates to a process for the production of pressure-sensitive recording paper having a layer of microcapsules containing a solution of a colour former on a support, the colour former being dissolved in an animal or vegetable oil at 105 to 260°C.

2.2 In the description of document D1 from page 6, line 9 to page 7, line 15 a total of 31 compounds are disclosed as being examples of suitable colour formers. It is then stated at page 7, lines 17 and 18, that "the above-mentioned colour formers can be used singly or in appropriate combinations of more than one type". In the paragraph common to pages 6 and 7, there is disclosed the use of eight individual monoamino and diamino fluorans as colour formers. Thus, of the total of 31 compounds suggested for use as colour formers, eight are monoamino and diamino fluorans. This thus constitutes a disclosure of the named fluorans used alone.

2.3 It is not relevant that no emphasis is placed on the use of these compounds as colour formers (paragraph 2.5a of the decision of the Opposition Division). In the paragraph common to pages 5 and 6 of document D1, it is stated that the choice of colour former does "not have any substantial influence on the present invention". Whilst indicating that none of the subsequently named compounds are preferred over the others, this does not detract from the subsequent disclosure.

It is also not relevant that, in the Examples, it is only in Example 3, and there only in a minor proportion, that a monoamino or diamino fluoran is used. The technical teaching of the description forms part of the disclosed matter just as much as the teaching derived from the Examples.

It is further not accepted that the teaching of document D1 when taken as a whole is ambiguous. As

stated above, the teaching of document D1 does not include a preference for any of the colour formers listed at page 6, line 9 to page 7, line 15. Thus, whilst there is no compound which is picked out as being preferred, there is also no suggestion that one or more of the 31 listed compounds is less suitable.

In case T 464/94, the data disclosed in a prior art document was held to be inconclusive, so that no reliance could be placed on the disclosure of that document. This is not the case with the disclosure of document D1. No ambiguity is seen in the process as disclosed in this document, there being no evidence that the disclosed process does not produce a satisfactory pressure-sensitive recording paper.

The Board is thus of the opinion that there is a clear and unambiguous disclosure of the subject-matter of claims 3 and 7 in document D1.

The subject-matter of claims 3 and 7 thus lacks novelty in view of the disclosure of document D1, and the main request of the respondent is thus not allowable.

3. *First Auxiliary Request*

3.1 Inventive step of claims 1 and 3

Document D1 represents the closest prior art. The subject-matter of claims 1 and 3 differs from the disclosure of this document by the feature that at least 90% of the colour formers comprise one or more of the following amino fluorans;
2'-(octylamino)-6'-(diethylamino)fluoran,

2'-anilino-3'-methyl-6'(diethylamino)fluoran, 6'(diethylamino)-2'-(1,1-dimethylethyl)fluoran, and 6'-(dibutylamino)-3'-methyl-2'-(phenylamino)-spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one. These compounds are referred to hereinafter as compounds A, B, C and D, respectively. Whilst document D1 teaches the use of eight specified amino fluorans in the paragraph common to pages 6 and 7, there is no mention of compounds A to D.

According to the patent in suit, the problem to be solved is stated at page 2, lines 44 to 47, as being to use natural vegetable and animal oils, "without necessarily employing any conventional synthetic solvent, for a group of colour-formers in conventional micro-capsules, and more particularly that sufficiently concentrated solutions of this group of colour-formers in such vegetable or animal oils can be achieved to provide good imaging, and good shelf-life characteristics."

The use of natural vegetable and animal oils is, however, known from document D1. Further, there is no evidence to suggest that the use of the specified colour formers results in improved imaging and shelf-life characteristics as compared with the colour formers known from document D1. It was objected on behalf of the respondent that it was not possible to include comparative data at the time of drafting the specification of the patent in suit. However, such comparative data have also not been supplied during the subsequent proceedings. The problem to be solved thus cannot be that expressed in the patent in suit. In the absence of any comparative data, the problem to be

solved must be regarded as being to provide an alternative to the known colour formers.

In view of the disclosure of document D1, the person skilled in the art would consider using as colour formers compounds similar to those disclosed in document D1 and, in the absence of any unexpected effect arising from the selection of the four specified compounds, the use of amino fluorans not mentioned in document D1 and, in particular, the use of compounds A to D, cannot be considered to involve an inventive step.

It is accepted by the Board that a product falling within the scope of the claims of the patent in suit has enjoyed commercial success and that this success is based on a good level of performance which has found favour with customers. However, it is not possible to identify the commercial success as resulting from the selection of the specified compounds as colour formers and not from any other factors.

The subject-matter of claims 1 and 3 thus does not involve an inventive step, and the first auxiliary request is not allowable.

4. *Second Auxiliary Request*

Claim 3 of the second auxiliary request is identical to claim 3 of the first auxiliary request, so that this request is similarly not allowable.

5. *Third Auxiliary Request*

5.1 Amendments

The amendment to the claims to specify that the colour formers are dissolved in "a deodorized refined rape seed oil solvent" is construed as requiring that no solvent other than a deodorized refined rape seed oil is present. The amendments thus comply with the requirements of Article 123(2) EPC, this feature being disclosed at page 8, lines 15 and 16 of the application as filed (printed version). The amendments also result in a restriction of the protection conferred and thus also comply with the requirements of Article 123(3) EPC.

5.2 Inventive step

Whilst the claims have been restricted to an exact definition of the compounds used as the colour former and the solvent, it remains the case that, as for the claims of the first and second auxiliary requests, there is no evidence to suggest that the use of the specified colour former composition or solvent results in improved imaging and shelf-life characteristics as compared with the colour formers known from document D1. Whilst it can be accepted that the statement at page 6, line 50, of the patent in suit that the record material has "a good shelf life" applies to the claimed material, nevertheless there is nothing to support the suggestion that the shelf life of the pressure-sensitive record material is an improvement over that obtained with colour formers known, for example, from document D1.

The subject-matter of claim 1 thus does not involve an inventive step, and the third auxiliary request is not allowable.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The patent is revoked.

The Registrar: The Chairman:

M. Dainese W. Moser