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File Number: T 748/89 - 3.3.1

Application No.: 83 102 599.4

Publication No.: 0 090 262

Title of invention: Certain 2-(2-substituted benzoyl)-1,3-cyclohexanediones

Classification: C07C 49/813

DECISION  
of 2 September 1991

Applicant: STAUFFER CHEMICAL COMPANY

Headword: Cyclohexanediones/STAUFFER

EPC Article 123(2)

Keyword: Inadmissible generalisation

Headnote



Case Number : T 748/89 - 3.3.1

**D E C I S I O N**  
of the Technical Board of Appeal 3.3.1  
of 2 September 1991

**Appellant :** STAUFFER CHEMICAL COMPANY  
Westport  
Connecticut 06880 (US)

**Representative :** Kraus, Walter, Dr.  
Patentanwälte Kraus, Weisert & Partner  
Thomas-Wimmer-Ring 15  
W - 8000 München 22 (DE)

**Decision under appeal :** Decision of Examining Division of the European  
Patent Office dated 3 July 1989 refusing European  
patent application No. 83 102 599.4 pursuant to  
Article 97(1) EPC.

**Composition of the Board :**

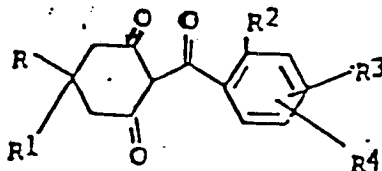
**Chairman :** R.W. Andrews  
**Members :** J.M. Jonk  
J.-C. Saisset

## Summary of Facts and Submissions

- I. European patent application No. 83 102 599.4, filed on 16 March 1983 (publication No. 0 090 262), was refused by a decision of the Examining Division dated 3 July 1989. The decision was based on Claims 1 to 30 for all the Contracting States except Austria and Claims 1 to 33 for Austria filed on 16 January 1987.

The independent Claims 1, 14, 27 and 28 for all the Contracting States except Austria read as follows:

- "1. A compound having the structural formula



wherein

- R and R<sup>1</sup> are hydrogen or C<sub>1</sub>-C<sub>4</sub> alkyl;  
 R<sup>2</sup> is chlorine, bromine, or iodine;  
 R<sup>3</sup> is hydrogen, iodine or chlorine; and  
 R<sup>4</sup> is hydrogen, halogen, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, nitro, or trifluoromethyl.
14. A method of controlling undesirable vegetation comprising applying to the area where control is desired, an herbicidally effective amount of a compound according to Claim 1.
27. A herbicidal composition comprising a compound according to Claim 1 and an inert carrier therefor.

28. A herbicidal composition comprising a herbicidally active 2-(2-chlorobenzoyl)-1,3-cyclohexanedione and an inert carrier therefor."

The independent Claims 1, 13 and 14 for Austria related to the preparation of a compound or composition according to above Claims 1, 27 and 28 for the other States.

Furthermore, Claims 9, 17, 30 and 31 for Austria correspond to the above Claims 14, 1, 27 and 28 for the other States.

II. The stated ground for the refusal was that the subject-matter of Claims 28 to 30 for all the Contracting States except Austria and Claims 14 to 16 and 31 to 33 for Austria extended beyond the content of the application as originally filed, contrary to the requirements of Article 123(2) EPC.

The Examining Division held that, in the application as originally filed, there did not exist any expression broad enough to cover herbicidal compositions comprising herbicidally active 2-(2-chlorobenzoyl)-1,3-cyclohexanediones. Moreover, it was considered that the novelty test with respect to Article 123(2), was not applicable to a broadened claim, because the subject-matter of the original claims would always destroy the novelty of the broadened claim. The novelty test would, in such a case, lead to a practice which evidently would be contrary to the requirement of Article 123(2).

III. A notice of appeal was filed against this decision on 25 July 1989 and the appeal fee was paid on the same date.

A Statement of Grounds of Appeal was submitted on 6 November 1989.

IV. In the written statements and during the oral proceedings held on 2 September 1991 the Appellant argued that Article 123(2) had not been violated because the broadened claims were supported by the application as filed, particularly by the following items:

- (i) The title of the invention which reads as follows:  
"Certain 2-(2-substituted benzoyl)-1,3-cyclohexanediones";
- (ii) Page 1, lines 14/15 which state:  
"Applicant's compounds must have a halogen substitution in the 2-position of the phenyl moiety of their compounds to obtain the exceptional herbicidal activity";
- (iii) Page 1, lines 19/20 where it is stated:  
"This invention relates to certain novel 2-(2-substituted benzoyl)-cyclohexane-1,3-diones as herbicides";
- (iv) Claim 5 where the preferred halogen substituted is stated to be chlorine; and
- (v) The examples, especially Table 1, where all substituents in the 2-position are halogen atoms and, with a few exceptions, all are chlorine atoms.

Furthermore, it was contended that the discussion of the broad group of intermediates disclosed in Japanese patent application No. 84632-1974 in connection with the teaching that Applicant's compounds must have a halogen substitution in the 2-position of the phenyl moiety to obtain the herbicidal activity (cf. page 1, under

"Background of the Invention") also formed a basis for the broadened claims.

As an additional support for the allowability of the broadened claims the Appellant argued that the original disclosure of the present application would destroy the novelty of the broadened claims, so that the "novelty test" in order to establish the allowability of the broadened claims with respect to Article 123(2) would be fulfilled. In this connection the Appellant particularly referred to the decisions of the Boards of Appeal T 194/84, T 17/86, T 133/85, T 260/85 and T 66/85.

- V. The Appellant requested that the decision of the Examining Division be set aside and a patent granted on the basis of claims in accordance with the main, first auxiliary or second auxiliary request filed during the oral proceedings.

The claims according to the main request corresponded to the above claims, but Claims 1, 14 and 27 of the claims for all the Contracting States and Claims 1, 9, 13, 17 and 30 were amended in order to meet the requirement of Article 84 EPC as regards support in the description, by replacing "iodine or chlorine" by "or halogen" in the definition of R<sup>3</sup> and "halogen" by "chlorine, bromine or iodine" in the definition of R<sup>4</sup>.

The claims according to the first auxiliary request correspond to the claims of the present main request, except that Claim 28 and Claim 31 (AT) were amended by inserting the term "certain" before "herbicidally" and Claim 14 (AT) was amended by inserting the term "certain" before "2-(2-chlorobenzoyl)-1,3-cyclohexanedione".

The claims according to the secondary auxiliary request corresponded with the claims according to the main request, except for the deletion of Claims 28 to 30 for all the Contracting States except Austria and Claims 14 to 16 and 31 to 33 for Austria.

VI. At the conclusion of the oral proceedings, the Board's decision to order the grant of the patent in accordance with the second auxiliary request was announced.

#### Reasons for the Decision

1. The appeal complies with Articles 106 to 108 and Rule 64 EPC and is, therefore, admissible.
2. The above-mentioned amendments to the claims of the main request and those of the first and second auxiliary requests do not give rise to objections under Article 123(2) EPC. The amendments to the claims according to the main and second requests are based on page 2, lines 2 to 4 of the patent specification and the amendment to the claims in accordance with the first auxiliary request are supported by the first sentence under "Description of the Invention".
3. The first issue to be dealt with is whether the subject-matter of Claim 28 and Claims 14 and 31 (AT) according to the main request meet the requirements of Article 123(2) EPC.
  - 3.1 These claims concern a herbicidal composition comprising a herbicidally active 2-(2-chlorobenzoyl)-1,3-cyclohexanedione and an inert carrier therefor and a method for its preparation. They embrace, therefore, compounds other than the compounds originally claimed,

which are defined by R and R<sup>1</sup> in the 4-position of the cyclohexane ring and R<sup>3</sup> and R<sup>4</sup> in the benzene ring (cf. particularly original Claim 1). It is this aspect which requires investigation as to whether the requirement of Article 123(2) is fulfilled.

- 3.2 The description and claims as originally filed are wholly consistent in referring only to compounds having the structural formula shown above i.e. to compounds defined by specific substituents R, R<sup>1</sup>, R<sup>3</sup> and R<sup>4</sup> in particular positions of the 2-(2-chlorobenzoyl)-1,3-cyclohexanedione basic structure (cf. also page 1, line 2 to page 2, line 6 of the description). More particularly, the disclosure in the description relating to the structure, the herbicidal properties and the preparation of the present compounds refers to these clearly defined compounds (cf. page 2, line 7 to page 3, line 7). Furthermore, all the examples relate to compounds encompassed by this general formula.

For the skilled person there is, therefore, neither any disclosure of 2-(2-chlorobenzoyl)-1,3-cyclohexanedione compounds other than the clearly defined compounds, nor that such compounds are herbicides.

- 3.3 The Board also cannot accept the Appellant's arguments which seek to prove that the broadened claims are supported by the original patent application, particularly by the disclosures indicated under above items (i) to (v).

From the title of the invention (cf. item (i)), which according to the Convention shall clearly and concisely state the technical designation of the invention (cf. Rule 26(1)(b) EPC), and the first sentence under "Description of the Invention" (cf. item (iii)), which because of its wording and place in the description is



apparently meant to specify the technical field to which the invention relates (cf. Rule 27(1)(a) EPC), the skilled person would only deduce that the invention generally concerns 2-(2-substituted benzoyl)-cyclohexane-1,3-diones having herbicidal activity and that the actual invention, in such terms that the technical problem and its solution can be understood, will be particularised in the the description which follows. In fact this is accomplished by the sentences on page 1, lines 19/20 of the patent application referred to above and the one immediately following it which refers to the compounds of this invention having the above-mentioned structural formula.

The sentence on page 1, lines 14 to 16, which states that "Applicant's compounds must have a halogen substitution in the 2-position of the phenyl moiety of their compounds to obtain the exceptional herbicidal activity." (item (ii)) forms part of the section "Background of the Invention", and does not give any hint to the skilled person that every possible 2-(2-halogenobenzoyl)-1,3-cyclohexanedione would have this activity. Actually, in the Board's judgment, it is already clear from the wording of this sentence, particularly by the expressions "Applicant's compounds" and "the phenyl moiety of their compounds", that this substitution in the 2-position is to be read in conjunction with the originally claimed compounds of the invention as clearly defined by means of the general formula.

Also the subject-matter of original Claim 5 which states that the substituent in the 2-position is chlorine (item (iv)) and the Examples of the present application wherein all substituents in the 2-positions are halogen atoms and, with a few exceptions, are chlorine atoms (item (v)) cannot form any basis for broadening the originally claimed invention, because the compounds

according to Claim 5 and the compounds of the Examples clearly fall under the scope of the originally claimed compounds as defined in terms of the structural formula. In the Board's opinion, the skilled person would consider this disclosure only as indicating that the 2-halogen substituent is an important feature of the originally claimed compounds in the limited context of compounds further substituted in the clearly defined manner and that chlorine is the preferred halogen substituent in the 2-positions of such compounds.

3.4 The disclosure of the relatively large group of 2-benzoyl-1,3-cyclohexanediones in Japanese patent application No. 84632-1974 and the teaching that, in contrast to these known compounds, the present compounds have herbicidal properties because of the 2-halogen substituent in the phenyl moiety (cf. page 1, lines 3 to 18 of the present application) also cannot support the broadened claims. Firstly, because - as set out above - the described effect of the 2-substituent is only connected with the originally claimed compounds as clearly defined by means of the structural formula (cf. section 3.3, paragraph 3). Secondly, even if the disclosed group of known 2-benzoyl-1,3-cyclohexanedione intermediates were taken as the starting point for an alleged invention based on the discovery that only the presence of a 2-halogen substituent in these known compounds is necessary to confer herbicidal activity, this would not provide sufficient support for the broadened claims, because the substitution in the cyclohexane ring of the known intermediate compounds is restricted to 0, 1 or 2 alkyl groups (cf. page 1, line 4 of the description).

3.5 In accordance with an earlier decision of another Board of Appeal (T 194/87, OJ EPO 1990, 59) it is the Board's opinion that the Appellant's further argument, that the

original application could properly be cited against the novelty of the present broadened claims, is based on incorrect application of the novelty test. Otherwise it would follow that amendments involving a generalisation or the omission of a feature would always be allowable. It is important that it is the change in content which is tested, that is, the amended content minus the original content, so that the test is also applicable to amendment by generalisation or omission of a feature.

In the present case, the subject-matter of the broadened claims can be seen as a generalisation of the originally claimed compounds to every possible 2-(2-chlorobenzoyl)-1,3-cyclohexanedione compound. Thus, the subject-matter generated is the group of 2-(2-chlorobenzoyl)-1,3-cyclohexanediones other than the originally claimed compounds and this generated subject-matter is novel when compared with the original content of the application, because as demonstrated in paragraphs 3.2 to 3.4 above, compounds other than the originally claimed and clearly defined compounds are neither explicitly nor implicitly disclosed. Moreover, if considered in another way, a future claim to compositions containing an arbitrarily substituted 2-(2-chlorobenzoyl)-1,3-cyclohexanedione in which the originally claimed compounds are disclaimed would be anticipated by the subject-matter generated by the amendment but not by the original disclosure.

3.6 The other decisions of Boards of Appeal mentioned by the Applicant, namely T 133/85, T 260/85, T 17/86 and T 66/85, have in common the relevant question whether or not the amendment is consistent with the original disclosure, i.e. whether or not information is directly and unambiguously derivable from that previously presented. In the present case - as indicated above - this question has been answered in the negative by the Board.

4. The claims according to the first auxiliary request differ from those of the main request only in that the broadened Claim 28 for all the Contracting States except Austria and Claims 14 and 31 for Austria are related to certain 2-(2-chlorobenzoyl)-1,3-cyclohexanediones. Apart from the question of allowability of these claims regarding Article 84 EPC because of the term "certain", it is clear that for these claims the allowability of the generalisation of the originally claimed compounds to the arbitrarily substituted 2-(2-chlorobenzoyl)-1,3-cyclohexanediones in relation to Article 123(2) EPC must also be investigated. Accordingly, the same considerations apply to these claims as to those of the main request.
5. Therefore, the main and the first auxiliary request are refused because the requirements of Article 123(2) have not been fulfilled.
6. The claims according to the second auxiliary request do not contain the broadened claims. Therefore, these claims fulfil the requirements of Article 123(2) EPC.
7. In the Board's judgment, the present application is now ready for grant since it is clear from the proceedings that the Examining Division found there were no objections regarding the requirements of Articles 52 to 57 EPC.

Order


For these reasons, it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the first instance with the order to grant a patent on the basis of the claims in accordance with auxiliary request II filed during the oral proceedings for all Contracting States except Austria and for the Contracting State Austria and the published description in which the title and lines 1 to 3 on page 1 have been deleted.

The Registrar:

The Chairman:

  
E. Görgmaier

  
R.W. Andrews