CANDIDATE’S ANSWER

B (Ch), EQE 2016

Letter to the EPO
European Patent Office
80298 Munich
Germany

This letter comprises the reply of the applicant to the communication under Article 94(3) EPC issued by the Examining Division.

Request

The applicant requests that a European patent be granted on the basis of the enclosed set of claims. The description will be adapted as soon as agreement on the set of claims has been reached with the Examining Division.

Amendments & Basis

The subject matter of the claims as amended has basis in the application as filed inter alia as follows:

Claim 1

Independent claim 1 has been amended to include the features that the composition is a paint, that the cyclohexyl urea derivative is of formula (i), that the cyclohexyl urea derivative is embedded in a polymer matrix and wherein the content of cyclohexyl urea derivative in the polymer matrix is at most 25 wt%. Furthermore, the feature that composition is such that “at least 50% of dogs and cats are kept away from an object over a one year period” has been removed.
Basis for these amendments are found in claim 1 as originally filed, claim 2 as originally filed and paragraph [005] of the application (for the definition of the cyclohexyl urea derivative), claim 4 as originally filed and paragraph [008] of the application (for the composition being a paint. In this regard, it is clear from paragraph [008] that paints individually from sprayable dispersions are envisaged and covered by the application as filed), claim 3 as originally filed and paragraph [007] (for the polymer matrix) and paragraph [007] (for the content of the polymer matrix in the paint. In this paragraph it is made clear that the polymer matrix is present in amounts of 5 to 25 wt% for a paint composition).

All passages referred to concern the general disclosure of the application and may therefore be combined.

With regard to the removal of the feature that at least 50% of dogs or cats are kept away from an object over a one year period, it is clear from paragraph [004] that this is not an essential feature as it is stated that “usually, the cyclohexyl derivatives…” Therefore, this is not an essential feature and may be deleted.

Claim 2

Basis for this claims is as for claim 1 described above and paragraph [005], last sentence, where a particularly preferred embodiment is defined.

Claim 3

Basis for this claim is found as for claims 1 and 2 discussed above and in example 1 in paragraph [0011].

Claim 4

Basis for this claim is as for claim 1 described above and in paragraph [009] where it is stated that a cyclohexyl urea derivative content of 15 to 25 wt% is advantageous.
Claim 5

Independent claim 5 has basis in claim 4 as originally filed and the same as for claim 1 as described above, as well as claim 1 as originally filed.

The features of claims 2, 3 and 4 are disclosed in the application as originally filed in a general manner. Therefore, the skilled person recognised directly and unambiguously that they can be combined with the features of claim 1 as amended.

All amended claims have basis in the application as originally filed. Accordingly, the amended claims are in conformity with Article 123(2) EPC.

Novelty

The present invention is novel having regard to both cited references D1 and D2, respectively.

Claim 1

D1 discloses powders or granules comprising cyclohexyl urea derivatives falling within the scope of formula (i) (see paragraph [001] of D1). D1 also discloses that such compounds may be embedded within a polymer matrix (paragraph [003] of D1; “embedded in a polymer matrix”). D1 states that “it is desirable to embed in the polymer matrix as high a concentration of dog repellent [ie cyclohexyl urea derivative] as possible, namely 20 wt% or more” (paragraph [004] D1).

However, D1 does not disclose a paint containing cyclohexyl urea derivatives. In fact, as mentioned above, D1 only discloses powders or granules.

D2 discloses ready to spray dispersions (paragraph [004] D2) containing cyclohexyl urea derivatives of formula A (see paragraph [002] of D2) falling within the scope of formal (i) of the present claims. D2 discloses that the compounds of formula A are embedded in a
polymer matrix (see paragraphs [001] and [003] of D2). D2 also discloses that the
cyclohexyl urea derivatives may be present in amounts of 5 wt% in the polymer matrix.

However, D2 does not disclose paint compositions. In fact, as mentioned above, D2 only
describes sprayable dispersions.

Therefore, the points of claim 1 are novel having regard to the documents referred to
above.

Claims 2 to 4

Claims 2 to 4 all depend from claim 1. Novelty is provided by the fact that the paints of
claim 1 are novel (see above).

Claim 5

As discussed above, neither of D1 or D2 disclose paints. Therefore, although D1 and D2
disclose the use of cyclohexyl urea derivatives embedded in a polymer matrix for
repelling dogs and insects, small rodents and birds, respectively, neither of these
documents discloses the use of paints containing cyclohexyl urea derivatives embedded
in a polymer matrix for repelling dogs or cats.

Therefore, the use according to claim 5 is novel having regard to the documents referred
to above.

Inventive Step

As set out in the application, the present invention is specifically concerned with
measures for keeping dogs and cats away from walls ([001]). In particular the present
invention is concerned with compositions which guarantee a repellent effect over a longer
period of time and have low toxicity for humans and pets (paragraph [004]).
Claim 1

D1 represents the closest prior art to the subject matter of claim 1. This is because D1 is the same technical field as the subject matter of claim 1, namely repellents for cats and dogs (dogs in the case of D1).

Furthermore, D1 is directed to the same purpose, namely providing repellents that are effective to repel dogs for a long period of time and to prevent the active ingredient, i.e. the repellent, from being washed away by rain (see paragraph [009] of the application and paragraph [002] of D1). Furthermore, D1 and the subject matter of claim 1 have the same number of features in common as does claim 1 with D2.

D2 is not closes prior art because it is not directed to the same purpose. Although D2 is directed towards repellents these are for agricultural use and the aims if for controlled release. Although cats and dogs are mentioned in this document, prevent them from urinating on walls is not the primary purpose of this document. These is also no mention of the problem of the active ingredient being washed away by rain.

Accordingly, a person skilled in the art would recognise D1 as the closest prior art.

Starting from the disclosure of D1, the distinguishing feature of claim 1 as amended is the fact that the composition is a paint.

The technical effect relating to this distinguishing feature is that the active ingredient is prevented from being washed out by the rain [00] where it is stated that “this prevents the active ingredient from being washed out by the rain”).

Therefore, the objective technical problem is “how to prevent an active ingredient, i.e. a dog repellent such as cyclohexyl urea derivatives, being washed away by the rain”.

As a solution to the objective technical problem, the paint composition according to claim 1 is provided. The objective technical problem is solved by the present invention as shown in the examples of the application as filed. It is clearly shown in example 3 that
paints according to the present invention having at least 10 wt% polymer matrix resulted in 60% fewer dogs urinating thereon compared to non-inventive examples which contain no polymer matrix. The walls in this experiment were exposed to wind and rain over a period of one year. It follows from the evidence set out above that the objective technical problem is, in fact, solved by the paint of amended claim 1.

Documents D1 and D2 both individually and in combination do not suggest in any manner a solution to the technical problem to the skilled person.

D1 suggests using a rainproof device consisting of a receiving container which is filled with the polymer matrix containing the embedded repellent (paragraph [004] D1). There is no suggestion whatsoever in this document toward incorporating the polymer matrix into a paint. In fact, D1 teaches away from such a solution by explicitly suggesting the rainproof device discussed above.

D2 states that “the effect of the repellent wears off significantly within a short space of time if they are exposed to sunlight and affected by moisture” (paragraph [006] D2) but suggests no alternative and, in fact, indicates that further experiments must be conducted in this regard. Furthermore, as the compositions of D2 are for agricultural use on, for example, fields, paints are not suitable for such applications. As D2 is completely silent with regard to paints a skilled person would find no motivation whatsoever based on this document to modify the granules and powder of D1 to be a paint composition.

Accordingly, claim1 as amended involves an inventive step over D1 and D2 either alone or in combination.

The embodiments of the paint defined in dependent claims 2 to 4 involve an inventive step by virtue of claim 1 to which said claims refer back.

Claim 5

This claim is directed towards the use of the paint according to claim 1 for repelling cats or dogs. Therefore, the arguments for independent claim 1 equally apply to claim 5.
Neither of D1 or D2, either alone or in combination, teach the use of the paint of the present invention for repelling cats or dogs.

Accordingly, claim 5 displays an inventive step.
Unity of invention

As discussed above, the claims are novel over D1 and, therefore, it is submitted that they have unity of invention.

Clarity

Claim 1 has been amended to delete the feature that the composition is used to repel at least 50% of dogs or cats for up to 1 year. Accordingly it is submitted that this objection is now moot. Furthermore, a definition of the cyclohexyl urea derivatives has been added to the claims so it is submitted that this term is now clear.

With regard to the term “paint” I is submitted that this term is well known to a person skilled in the art. This is clearly evidenced in paragraph [008] of the application as filed, where paints are described to be “a coating material in liquid or paste form which is applied by a brush or roller”. Accordingly, it is submitted that this term is clear, particularly when read in view of the application as filed.

It is also submitted that the term “polymer matrix” is clear as it has been defined as having a cyclohexyl urea derivative embedded therein. The term “dog or cat repellent” has been deleted and, further, claim 5 has the feature that at least 50% of dogs or cats are kept away from an object over a 1 year period to make the term “to repel dogs or cats” clear.

Enc: Amended set of claims
Amended Claims

1. Paint containing a polymer matrix in which a cyclohexyl urea derivative of the formula (i)

Insert diagram

Is embedded,
A being either oxygen or sulphur,
R being an alkyl with 3 to 8 carbon atoms, cyclo alkyl with 4 to 8 carbon atoms, hydrogen or a halogen selected from the group consisting of chlorine, fluorine, iodine or bromine,
R\(^1\) and R\(^2\) being the same or different and selected from the group consisting of alkyl with 1 to 8 carbon atoms, cycloalkyl with 4 to 8 carbon atoms or hydrogen,
Wherein the content of cyclohexyl urea derivative in the polymer matrix is at most 25 wt\%, and wherein the pain contains at least 10 wt\% of the polymer matrix [*see examiner’s note].

2. Paint according to claim 1 in which the cyclohexyl urea derivative is of formula (i) wherein A is oxygen, R is hydrogen and R\(^1\) and R\(^2\) are the same and alkyl with 1 to 3 carbons.

3. Paint according to claim 2, wherein the cyclohexyl urea derivative has the formula

Insert diagram

4. Paint according to any one of claims 1 to 3 in which the content of cyclohexyl urea derivative in the polymer matrix is between 15 and 25 wt\%.

5. Use of paint according to any one of claims 1 to 3 to repel dogs or cats by which at least 50\% of dogs or cats are kept away from an object over a 1 year period.
Note to examiner

I have limited the claims to a paint in view of D1 and, in particular D2 and the client’s comments regarding sprayable dispersions being less effective.

However, I propose the following main claim for a divisional application:

Divisional claim

1. Sprayable dispersion containing a polymer matrix in which a cyclohexyl urea derivative of the formula (i)

   A being either oxygen or sulphur,
   R being an alkyl with 3 to 8 carbon atoms, cycloalkyl with 4 to 8 carbon atoms, hydrogen or a halogen selected from the group consisting of chlorine, fluorine, iodine or bromine,
   R\(^1\) and R\(^2\) being the same or different and selected from the group consisting of alkyl with 1 to 8 carbon atoms, cycloalkyl with 4 to 8 carbon atoms or hydrogen,
   Wherein the content of cyclohexyl urea derivative in the polymer matrix is at most 25 wt %,
   And wherein the polymer matrix makes up 10 to 25 wt% of the ready to spray dispersion.

Note 2: I should have included the feature that the paint comprises at least 10 wt% of the polymer matrix into claim 1. This is because only paints containing this amount of polymer matrix have the advantageous effects of the invention, namely better adhesion to prevent being washed as discussed in my letter to the EPO.

Basis in paragraph [009] of the application as filed.

I ran out of time to go back and include this feature throughout my answer but realise that it should have been included.
Examination Committee I: Paper B - Marking Details - Candidate No

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Examination Committee I agrees on 78 points and recommends the grade PASS.