Internal distribution code:
(A) [ ] Publication in OJ
(B) [ ] To Chairmen and Members
(C) [ ] To Chairmen
(D) [X] No distribution

Datasheet for the decision of 17 November 2010

Case Number: T 1585/05 - 3.3.07

Application Number: 95943164.4

Publication Number: 0812182

IPC: A61K 7/32

Language of the proceedings: EN

Title of invention:
Antiperspirant compositions

Patent Proprietors:
Unilever PLC, et al

Opponents:
Colgate-Palmolive Company
Henkel AG & Co. KGaA
L'OREAL

Headword:
-

Relevant legal provisions:
-

Relevant legal provisions (EPC 1973):
EPC Art. 56
RPBA Art. 12, 13

Keyword:
"Inventive step (no)"
"Late filed requests"

Decisions cited:
-

Catchword:
-

Europäisches Patentamt | European Patent Office | Office européen des brevets

Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 1585/05 - 3.3.07

D E C I S I O N
of the Technical Board of Appeal 3.3.07
of 17 November 2010

Appellants: (Patent Proprietors)
Unilever PLC
Unilever House
Blackfriars
London
Greater London EC4P 4BQ (GB)

and

Unilever N.V.
Weena 455
NL-3013 AL Rotterdam (NL)

Representative:
Baker, Colin
POTTER CLARKSON LLP
Park View House
58 The Ropewalk
Nottingham NG1 5DD (GB)

Appellants: (Opponent 01)
Colgate-Palmolive Company
300 Park Avenue
New York NY 10022-7499 (US)

Representative:
Jenkins, Peter David
Page White & Farrer
Bedford House
John Street
London WC1N 2BF (GB)

Appellants: (Opponent 02)
Henkel AG & Co. KGaA
Patente (FJP)
D-40191 Düsseldorf (DE)

Representative:
-

Appellants:
(Opponent 03)

L'OREAL
14, rue Royale
F-75008 Paris (FR)

Representative:

Dossmann, Gérard
Bureau D.A. Casalonga & Josse
Bayerstrasse 71/73
D-80335 München (DE)

Decision under appeal:

Interlocutory decision of the Opposition Division of the European Patent Office posted 3 November 2005 concerning maintenance of the European patent No. 0812182 in amended form.

Composition of the Board:

Chairman: S. Perryman
Members: D. Semino
B. ter Laan

Summary of Facts and Submissions

I. The appeals of the proprietors and of the opponents lie against the decision of the Opposition Division posted on 3 November 2005 to maintain European patent No. 0 812 182 (based on European patent application No. 95 943 164.4) in amended form. The granted patent comprised 10 claims, independent claim 1 reading as follows:

"1. A propellant driven antiperspirant aerosol composition suitable for topical application to the human skin, comprising 10-50% by weight of a base and 50-90% by weight of a propellant, the base being in the form of a water in oil emulsion and comprising a dissolved aluminium salt, a volatile silicone, and a silicone surfactant, wherein the composition is packaged in an aluminium can."

II. Three notices of opposition were filed, in which revocation of the patent in its entirety was requested on the grounds of lack of novelty (opponents 02), lack of inventive step (opponents 01, 02 and 03) and insufficiency of disclosure (opponents 01) as set out in Article 100(a) and (b) EPC. The oppositions were *inter alia* supported by the following documents:

D1: A. J. Disapio, "New Approaches to Antiperspirant and Deodorant Formulation", HAPPI, 23(1986), No. 2, pages 43, 46, 50 and 52,
D9: US-A-4 695 451,
D14: P. A. Sanders, "Handbook of Aerosol Technology", Second Edition, 1979 (Reprint 1987), "Chapter 5. Containers", pages 56-68,

D15: M. A. Johnsen, "Considerations in the Development of Aerosol Products ", Spray Technology and Marketing, August 1994, pages 30-31 and 40-43.

III. The decision under appeal was based on the patent as granted as the main request and a single auxiliary request in which claim 1 had been amended by addition of the feature "and wherein the composition includes 0.1-1% by weight of a silicon gum". By means of the decision the patent was maintained in amended form according to the auxiliary request.

IV. According to the reasons of that decision:

(a) the patent as granted met the requirements of Article 83 EPC;

(b) the subject-matter of claim 1 according to the patent as granted did not meet the requirements of Article 56 EPC in view of D1, taken as the closest state of the art, and either the common general knowledge of the person skilled in the art, or the teaching of D14 or D15;

(c) the amended claims and description according to the auxiliary request met the requirements of the EPC.

V. All four parties to the opposition proceedings appealed that decision. Notices of appeal were filed on 21 December 2005 (opponents 01), 22 December 2005 (opponents 03), 2 January 2006 (opponents 02) and 11 January 2006 (proprietors) and the appeal fee were paid on the same days. The statements setting out the

grounds of appeal were filed on 1 March 2006 (opponents 03), 3 March 2006 (opponents 01), 9 March 2006 (proprietors) and 13 March 2006 (opponents 02).

VI. In reaction to a communication by the Board sent in preparation to the oral proceedings, the proprietors filed with letter of 10 November 2009 two sets of claims as Auxiliary Requests 1 and 2, their claims 1 respectively reading as follows:

Auxiliary Request 1

"1. A propellant driven antiperspirant aerosol composition suitable for topical application to the human skin, comprising 10-50% by weight of a base and 50-90% by weight of a propellant, the base being in the form of a water in oil emulsion and comprising a dissolved aluminium salt, a volatile silicone, and a silicone surfactant, wherein the composition is packaged in an aluminium can, wherein the composition additionally comprises 1.5-10% by weight of an emollient."

Auxiliary Request 2

"1. A propellant driven antiperspirant aerosol composition suitable for topical application to the human skin, comprising 10-50% by weight of a base and 50-90% by weight of a propellant, the base being in the form of a water in oil emulsion and comprising a dissolved aluminium salt, a volatile silicone, and a silicone surfactant, wherein the composition is packaged in an aluminium can, wherein the composition

additionally comprises 1.5-10% by weight of a C_2-C_4 polyol emollient."

VII. At the oral proceedings held on 17 November 2009, the proprietors maintained the requests on file and stated that they did not seek maintenance of the patent as maintained by the Opposition Division.

VIII. The arguments of the proprietors can be summarised as follows:

Main request

(a) Document D1, which was to be considered as the closest state of the art, disclosed a composition as specified in claim 1 as granted, but did not give any information on the material of the packaging container.

(b) Even if it were accepted that the general problem posed in the patent, namely to provide propellant driven antiperspirant aerosol compositions with reduced corrosion problems, had already been solved by the composition as disclosed in D1, the examples in the application supported a surprising effect for the combination of the specific composition and an aluminium can, showing that corrosion of the can was totally prevented even when the interior of the can was scratched and that superior results were obtained compared with a tin plate container. The problem to be solved was therefore to provide improved corrosion resistance for the compositions of D1.

(c) The available prior art did not hint at the proposed solution; on the contrary it showed that a prejudice existed against the use of aluminium cans with this kind of composition. D14 in particular disclosed that aluminium containers for aerosol applications were corrosion resistant only in the presence of oxygen and water, which was not the case for the claimed water-in-oil composition. Moreover, D14 indicated that glass was unsurpassed in its ability to resist corrosion and that aluminium only had a small market share, so that it taught away from using aluminium. Similarly, D15 illustrated the sensitivity of aluminium containers to acidic and basic formulations and, even if it specified that lined aluminium containers could hold aerosols having pH values between 3 and 11, it made the reader aware of the problems related to the integrity of the lining of the container.

(d) For those reasons the skilled person trying to solve the above-defined problem would not consider aluminium as a desirable choice for the container material.

(e) Document D9 would not be suitable as the closest state of the art, since it addressed a different problem, namely to provide non-oily non-flammable aerosol antiperspirant compositions, and it disclosed compositions that were more remote from the claimed compositions than the ones of D1. Moreover, even if one example mentioned the use of a lacquered aluminium container, it indicated the

same corrosion performance for both lacquered aluminium and tinplate containers.

Auxiliary Requests 1 and 2

(f) The claims 1 of Auxiliary Requests 1 and 2 resulted from the combination of granted claims, so that those requests could not have come as a surprise to the opponents. Moreover they were clear and they had a clear basis in the application as filed, so that their analysis should not pose any problem. Their late filing was further justified by an accident involving the representative in charge of the case on 9 October 2009 and requiring the involvement of a new representative shortly before the oral proceedings. For those reasons, the requests should be admitted into the proceedings.

IX. The arguments of the opponents can be summarised as follows:

Main request

(a) D1, which was the closest state of the art, disclosed not only a composition according to claim 1 but also contained the information that with that kind of composition, having water encapsulated in the silicone, corrosion of the container was considerably reduced.

(b) The problem mentioned in the patent in suit, namely to provide propellant driven antiperspirant aerosol compositions with reduced corrosion

problems, had therefore already been solved in D1. The available examples, for lack of a proper comparison, neither showed a surprising effect due to the choice of aluminium as the can material, nor a synergy between the composition and aluminium cans. The problem to be solved was therefore simply that of finding a suitable container material for the composition of D1.

(c) D1 mentioned the possibility of using with success traditional container materials. D14 gave an overview of suitable aerosol containers and mentioned the good corrosion resistance of aluminium containers which could be further improved by means of coatings. D15 also mentioned that suitably lined aluminium containers could hold aerosols having pH values between 3 and 11, which covered the whole range of skin treatment products. In addition, D9 confirmed the information of D1 that the water-in-oil emulsion in the aerosol conferred stability to the composition and permitted to avoid corrosion. Those documents did not prove the existence of a prejudice against the use of aluminium, but rather suggested its use as a suitable container material.

In view of this, the skilled person, looking for a suitable container material, would choose aluminium without exercising any inventive activity.

(d) D9, which disclosed a packaged propellant driven antiperspirant aerosol composition, could also be chosen as a starting point for the analysis of

inventive step, since it explicitly mentioned aluminium containers and their corrosion resistance. It disclosed in an example a composition packaged in an aluminium can with no visible corrosion after one year which differed from the present composition only in the combination of silicones and the propellant weight percent. In view of the disclosure of D9 itself, the propellant weight percent could not provide the required inventive activity. The problem could then be seen as that of providing an improved skin feel. The skilled person aiming at solving that problem would consider to use the claimed combinations of volatile silicones and silicone surfactants, e.g. in view of D1.

Auxiliary Requests 1 and 2

(e) The proprietors had not introduced any auxiliary request with the statement setting out the grounds of appeal, nor with the reply to the appeals of the opponents. Instead, only one week before the oral proceedings they filed two auxiliary requests, which were not in reaction to a new situation in the proceedings, since no new facts and no new evidence had been introduced during the appeal proceedings.

Those late filed requests were not justified by the accident involving the previous representative as it took place after the expiration of the deadline for filing further submissions.

(f) Moreover, the features added to claim 1 according to the auxiliary requests had nothing to do with the problem that had been discussed during the opposition and the appeal proceedings, namely improving corrosion resistance of the container, and raised the question whether an effect related to the added features was present and had been shown. They also raised several new clarity issues, e.g. which compounds fell under the functional definition "emollient", on which basis the weight percentage had to be computed and what limitation was implied by the word "additionally".

(g) Since it could not reasonably be expected that the Board and the opponents could deal with all these issues without adjournment of the oral proceedings, the auxiliary requests should not be admitted into the proceedings.

X. The appellants patent proprietors requested that the decision under appeal be set aside and that the patent be maintained as main request as granted or on the basis of Auxiliary Requests 1 or 2 filed on 10 November 2009.

XI. The appellants opponents 01, 02 and 03 requested that the decision under appeal be set aside and that the European patent be revoked.

Reasons for the Decision

1. All four appeals are admissible.

Main request

2. *Closest prior art*

2.1 The patent in suit concerns propellant driven aerosol compositions which are capable of being dispensed from a pressurised aerosol container (paragraph [0001]). Its object is to provide propellant driven antiperspirant aerosol compositions which contain a dissolved aluminium salt, which have a generally reduced incidence of pinholing of the container, and may therefore be generally safer to use (paragraph [0004]), pinholing being defined as perforation of the can resulting from ion attack and corrosion of the inner surface of the can (paragraph [0003]).

2.2 Document D1 concerns antiperspirant and deodorant technology (page 43, first column, first paragraph) and is related in particular to the use of cyclomethicone (a volatile silicone) in antiperspirants (page 43, first column, last full paragraph). According to D1, the use of cyclomethicone offers a number of advantages, including that formulations containing it are easy to package because they do not react with traditional container materials (page 46, second column, last sentence).

2.2.1 In formula 9 of D1 a water-in-silicone emulsion aerosol is described (page 50, third column, last full paragraph) comprising 10% by weight of a base and 90%

of a propellant mixture (page 52, third column, formula 9), the encapsulated aqueous phase comprising aluminium chlorohydrate as a dissolved aluminium salt and the base comprising a continuous silicone phase comprising a mixture of cyclomethicone and dimethicone copolyol (3225C formulation aid), which is the same mixture of volatile silicone and silicone surfactant as described and used in the patent (paragraph [0011] and examples). The formulation is filled in aerosol cans without however specifying their material. According to D1, with water encapsulated in the silicone, corrosion of the container is considerably reduced (page 50, third column, last full paragraph).

2.2.2 As agreed by all parties and in accordance with the analysis of the document above, the propellant driven antiperspirant aerosol composition of granted claim 1 of the disputed patent does not differ from the composition according to formula 9 of D1. The only difference lies in the material of the can in which it is packaged, about which D1 is silent, and which, according to the patent in suit, is aluminium.

2.3 D9 discloses an aerosol antiperspirant composition in the form of a water-in-oil emulsion consisting of 25% to 50% by weight of a liquefied, normally gaseous propellant and 50% to 75% of a base consisting essentially of a water-soluble, astringent salt having antiperspirant efficacy, a water-in-oil emulsifier, a propellant-soluble emollient-stabilizer agent and water, said base being in the form of a water-in-oil emulsion. The propellant-soluble emollient-stabilizer agent consists of (1) a water-insoluble, organic, liquid emollient selected from the group consisting of

isopropyl esters of C_{12}-C_{18} alkanoic acids, C_8-C_{12} alkanols and silicone oils and (2) a water-insoluble organic liquid hydrocarbon having a boiling point in the range of 65°C to 130°C (claim 1). Among the silicone oils cyclic volatile silicones containing 3 to 6 carbon atoms are mentioned (column 4, lines 50-54). The preferred antiperspirant ingredients are "aluminium basic chlorides" of the formula $Al_2(OH)_{6-x}Cl_x$, x being a positive number from 1 to 5 (column 3, lines 49-68).

2.3.1 In example 2 (starting in column 8, line 52) a composition is disclosed consisting of 60% by weight of a base and 40% by weight of a propellant wherein the base is a water-in-oil emulsion, the water phase comprising aluminium chlorohydroxide and the oily phase comprising isopropyl myristate and a C_8 hydrocarbon mixture as main components. Samples of such a product have aged for more than one year at room temperature in both lacquered aluminium and tinplate containers without any visible corrosion (column 9, lines 7-10). In the disclosure of example 2 it is further observed that such a result confirmed the stability of the water-in-oil emulsion because if the water were in the continuous phase or in a separated phase, can corrosion would be expected (column 9, lines 10-13).

2.3.2 The compositions disclosed by D9 differ in several aspects from the ones now being claimed: no silicone surfactants are mentioned; volatile silicones are a possible option in the general disclosure but do not appear in the examples; the quantity of propellant in all examples is lower and only overlaps at the end of the range for the broadest disclosure.

2.3.3 The aim of document D9 is to develop improved aerosol antiperspirant compositions of the water-in-oil type, which leave a less oily deposit on the skin, exhibit good stability, are less expensive and easy to perfume (column 1, lines 51-61).

2.4 While both D1 and D9 concern propellant driven antiperspirant aerosol compositions and recognise the advantage of having a water-in-oil emulsion base in order to avoid corrosion, D1 discloses a composition falling under the wording of the present claims. Though D9 mentions aluminium containers in the examples, it discloses compositions that differ in several aspects from the claimed ones. D1 therefore not only describes the same purpose as the patent in suit, it also has the most relevant technical features in common with it and is hence to be chosen as the closest state of the art.

3. *Problem solved*

3.1 The patent in suit aims at a reduction of pinholing of the container (see point 2.1 above).

3.2 In the patent in suit three compositions are exemplified (table on page 4) and tested in aluminium cans with a scratched lacquered interior (paragraphs [0027] and [0028]). A series of cans stored at 0°C, 20°C, and 40°C for 8 or 12 months did not show any signs of pinholing or corrosion (paragraph [0029]). In contrast, identical compositions stored in tin plate cans having a lacquered interior showed signs of corrosion at 40°C after four months. Those storage results were said to be better than would have been expected if the composition without the volatile

silicone and silicone surfactant had been stored in lacquered tin plate cans (paragraph [0030]).

3.3 From the information given in the examples it cannot be seen if the comparison is the direct result of the use of aluminium instead of tinplate and not, for instance, of the properties of the lining or the absence of seams. However, the examples cannot serve as a proper comparison with D1 anyway, since that document is completely silent about the material of the containers used for their formulae and it cannot be assumed that tinplate was used. It cannot even be excluded that in D1 aluminium was used.

3.4 Therefore, and also because it was known from D1 that the composition there described and falling within the scope of the present claims considerably reduces corrosion of the container (page 50, third column, last full paragraph), the problem to be solved is to be seen as to provide a suitable container material for the non corrosive composition of D1.

3.5 From the examples in the patent in suit it can be seen that that problem has been effectively solved by using aluminium containers.

4. *Obviousness*

4.1 It remains to be decided whether the skilled person starting from D1 and looking for a suitable packaging material would arrive in an obvious manner at the claimed combination of the composition with an aluminium container.

4.2 The proprietors expressed the opinion that the selection of aluminium as the can material overcame a prejudice and cited D14 and D15 for support.

4.3 D14 is an article in a technical journal about the development of aerosol products and dealing specifically with container materials and D15 is an extract from a handbook on aerosol technology and is part of the chapter relating to containers, so that they are both suitable references to evaluate the common general knowledge of the person skilled in the art before the priority date and determine whether they support the existence of a prejudice.

4.4 D14 discloses the types of aerosol containers used in the market at the time of its publication (page 57, last paragraph) and analyses in detail each of them, mentioning advantages of their respective use. It discloses in particular that aluminium containers, which cover 3-4% of the market share (table at the bottom of page 57), are used when package appearance and container strength rather than cost are the main considerations (last full paragraph of page 66) and adds that they are quite corrosion resistant because of the continuous film of aluminium oxide which forms in the presence of oxygen and water vapour (sentence bridging pages 66 and 67).

4.4.1 D14 adds that tinplate containers often need evacuation of air in order to minimize corrosion, which could have the opposite effect with aluminium in view of maintaining the aluminium oxide layer (first paragraph of page 67). From that wording it is clear that the aluminium oxide forms in ambient air before the

container is filled and that it does not require that oxygen and water be present in the composition packaged in the container. Therefore the presence or absence of water in the composition, in whatever form, is not relevant.

4.4.2 D14 further discloses that aluminium containers can be manufactured without seams and permit therefore continuous interior coatings which allow a further improvement of corrosion resistance (page 67, first paragraph).

4.4.3 The indication in D14 that aluminium covers only 3-4% of the market share may be caused by several reasons, including e.g. its cost (cf. page 66, last full paragraph). Therefore, that information cannot be seen as a warning against its use for technical reasons.

4.4.4 Also the information in D14 that glass as a packaging material is unsurpassed in its ability to resist corrosion (page 68, second full paragraph) cannot be seen as a statement that aluminium would be an unsuitable material, particularly as far as cans are concerned.

4.4.5 The teaching of D14 can therefore not be seen as an indication of an existing prejudice regarding the use of aluminium as a container material for aerosol compositions.

4.5 D15 discloses that aluminium is sensitive to acidic and basic formulations (page 30, sentence bridging the first and the second column) and indicates that plain aluminium is attacked outside the pH range of 4.0 to

9.5, while if suitably lined, aluminium containers can hold aerosols having pH values between 3 and 11 (page 30, second column, first paragraph). D15 also indicates that side seams are usually the weak points of metal containers such as tinplate cans (page 30, third column to page 31, first paragraph), an advantage of aluminium cans being that they generally have no seams (page 31, second column, first full sentence).

4.5.1 In that light, the teaching of D15 cannot be interpreted either as indicating a prejudice against the use of aluminium as the can material for aerosol compositions, in particular since several of its advantages in terms of corrosion resistance are mentioned.

4.6 Therefore, the Board cannot follow the submissions of the proprietors that documents D14 and D15 would support the existence of a prejudice against the use of aluminium as the can material for aerosol compositions. On the contrary, they confirm that it was within the common general knowledge at the priority date of the patent in suit that aluminium was a suitable can material for the composition of D1.

4.7 In view of the above, the Board concludes that the skilled person, looking for a suitable can material for the composition of D1, would consider aluminium and would therefore arrive at the subject-matter of granted claim 1 without exercising an inventive activity.

Auxiliary Requests 1 and 2

Admissibility

5. According to Article 12(2) RPBA, first sentence (identical in wording to Article 10a(2) RPBA, first sentence, in the version valid at the time of filing of the appeals) "The statement of grounds of appeal and the reply shall contain a party's complete case". Admissibility of later amendments is ruled by Article 13 RPBA (identical in wording to Article 10b RPBA in the version valid at the time of filing of the appeals), whose paragraphs (1) and (3) read respectively as follows: "Any amendment to a party's case after it has filed its grounds of appeal or reply may be admitted and considered at the Board's discretion. The discretion shall be exercised in view of inter alia the complexity of the new subject matter submitted, the current state of the proceedings and the need for procedural economy" and "Amendments sought to be made after oral proceedings have been arranged shall not be admitted if they raise issues which the Board or the other party or parties cannot reasonably be expected to deal without adjournment of the oral proceedings".

5.1 The statement setting out the grounds of appeal of the proprietors contained arguments only in defence of granted claim 1 and no alternative claim request. In the reply to the grounds of appeal of the opponents, the proprietors only discussed the auxiliary request maintained by the Opposition Division and did not file any further requests. At the oral proceedings, they

stated, however, that they did not seek maintenance of the patent as maintained by the Opposition Division.

5.2 In the communication annexed to the invitation to oral proceedings the limit date of 1 October 2009 for filing further submissions was set by the Board, but the proprietor had not filed any submission or any new request by that date. The fact that a serious accident happened to the representative in charge of the case is immaterial, since the proprietors confirmed that the accident took place after expiration of the time limit.

5.3 Only one week before the oral proceedings did the proprietors file two new sets of claims as auxiliary requests. While it is noted that these new requests were filed by a new representative who assumed responsibility for the case due to unavailability of the previous one, this fact bears no weight on the admissibility of the claims, since the ultimate responsibility for filing requests always remains that of the proprietors, so that the Board has to consider that, unless otherwise proven, all actions undertaken by the former representative were undertaken in agreement with the proprietors and thus expressed their desires (see T 1420/06 of 5 June 2009, point 4.1 of the Reasons). The new representative is therefore bound to continue the proceedings from the point they had reached when he took over from his predecessor.

5.4 Neither the facts nor the evidence in respect of the appealed decision had changed in any way during the appeal proceedings. The opponents' case had been completely presented in their statements setting out the grounds of appeal and in the replies to the

proprietors' appeal. The facts and evidence regarding the granted claims correspond completely to the ones on which the contested decision was based, so that the filing of new requests at a late stage in the proceedings cannot be justified by a new situation which the proprietors could not have foreseen.

5.5 The requests do correspond to the combination of granted claim 1 with features that appear in dependent claims, as maintained by the proprietors (claim 8 as granted relates to compositions additionally comprising 0.5-10% by weight of an emollient; claim 9 as granted specifies the emollient as a C_2-C_4 polyol emollient, especially propylene glycol or glycerol). However, those added features have nothing to do with the corrosion resistance but are rather related to problems that had never been discussed in the opposition stage, nor during the appeal proceedings, in particular reduction of the incidence of white deposits on the skin (see paragraph [0018] in the patent). The added features, provided that they do constitute further distinguishing features with respect to the closest prior art, require a careful analysis of whether advantages or surprising effects related to them have been proven by the proprietors, which appears doubtful in view of the examples on file. In any case, such analysis would also require that a fair chance should be given to the opponents to show that no inventive activity can be acknowledged in relation to the added features. That could not be done without adjournment of the proceedings. Furthermore, as the opponents have also noted, further issues under Article 84 EPC are also raised by the amendments in the auxiliary requests.

5.6 Therefore, the Board decides to exercise its discretion according to Article 13(1) RPBA and following the criteria in Article 13(3) RPBA by not admitting Auxiliary Requests 1 and 2 into the proceedings.

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

S. Fabiani S. Perryman