

Publication in the Official Journal Yes / No

File Number: T 767/89 - 3.2.3

Application No.: 85 301 637.6

Publication No.: 0 155 157

Title of invention: Decorative floor covering

Classification: F21V 8/00

D E C I S I O N  
of 16 April 1991

Applicant: Craigie Stockwell Carpets Limited

Headword: Floor covering/Craigie

EPC Article 56

Keyword: "Inventive step (yes)", after amendment

**Headnote**



Case Number : T 767/89 - 3.2.3

**D E C I S I O N**  
of the Technical Board of Appeal 3.2.3  
of 16 April 1991

**Appellant :** Craigie Stockwell Carpets Limited  
142 St. Vincent Street  
Glasgow G2 5LD (GB)

**Representative :** Pattullo, Norman et al  
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**Decision under appeal :** Decision of Examining Division 2.2.08.103 of the European Patent Office dated 22 August 1989 refusing European patent application No. 85 301 637.6 pursuant to Article 97(1) EPC.

**Composition of the Board :**

**Chairman :** C.T. Wilson  
**Members :** H. Andrä  
J.C. Saisset

**Summary of Facts and Submissions**

I. European patent application No. 85 301 637.6 filed on 8 March 1985 and published on 18 September 1985 (publication No. 0 155 157) was refused by a decision of Examining Division 2.2.08.103 of the European Patent Office dated 22 August 1989. The decision was based on Claims 1 to 6 filed with letter of 30 March 1989.

The reason given for the refusal was that the subject-matter of Claim 1 did not involve an inventive step having regard to the prior art known from US-A-3 758 771.

II. On 26 October 1989 the Appellant lodged an appeal against the decision. The appeal fee was duly paid and the statement of grounds was received on 25 November 1989 together with new Claims 1 to 7.

III. After consultations by telephone dated 28 January and 13 March 1991 between the Rapporteur and the representative concerning essentially an objection under Article 123(2) EPC to Claim 1 and the adaptation of the description to the claims pursuant to Rule 27 EPC, the Appellant filed, by letter of 14 February 1991, a new set of Claims 1 to 7 and, by letter of 27 March 1991, new pages 1, 2, 3 and 4 of the description.

The Appellant requests grant of a patent on the basis of the new set of Claims 1 to 7.

IV. In his written statement, the Appellant essentially put forward the following arguments in support of his request:

The lack of inventive step alleged by the Examining Division is based entirely on US-A-3 758 771 which relates solely to wigs. This document and the present application lie in entirely different unrelated technical fields. In order to establish obviousness it is not sufficient to show that the characterising feature of the claim is known even in the same art; one must also consider whether the notional person of ordinary skill would be led to apply this feature in the circumstances surrounding the invention. The decoration of a carpet cannot be considered in isolation from its structure, insofar as the end result must be a product of practical utility. A carpet must be capable of carrying the weight of pedestrians and items of furniture over an extended period of time. Prior to the present invention, designers in the carpet industry would have rejected the concept of including optical fibres in carpeting on the ground that the optical fibres would be operationally destroyed by the imposed loads. The invention is based on the discovery or realisation that a practicable carpet of useful lifespan can be achieved by using the features that each optical fibre has a free end coterminous with the outer surface of the pile and that the optical fibres extend through the backing in a curve.

V. The text of Claim 1 is as follows:

"A decorative carpet having a backing (3) and a pile (4), the pile (4) having a first end portion affixed to the backing (3) and extending to a second end portion remote from the backing (3); characterised by a plurality of fibre optic cables (2) upstanding from the backing (3), the fibre optic cables (2) having first end portions coterminous with

the second end portion of said pile (4), and the cables (2) extending in a curve through the backing (3) to second end portions of the cables (2) exposed to a light source (7)."

#### Reasons for the Decision

1. The appeal complies with Articles 106 to 108 and Rule 64 EPC and is admissible.

#### 2. Admissibility of amendments

2.1 Claim 1 is essentially a combination of features of original Claims 1 and 2. The further feature of Claim 1 that the carpet has a backing and that the pile has a first end portion affixed to the backing and extending to a second end portion remote from the backing is based upon the original description, page 3, lines 9 to 17, in combination with Figure 1 of the original drawings. The further restriction of Claim 1 to the feature that the cables extend in a curve through the backing to second end portions of the cables exposed to a light source, has been disclosed on page 2, lines 2 to 9, of the original description.

The feature of original Claim 1 that more than one of the outwardly facing cable terminals is supplied with light from one light source is comprised in substance by the features of valid Claim 1 "... cables upstanding from the backing, the fibre optic cables having first end portions co-terminous with the second end portion of said pile, and the cables extending ... to second end portions of the cables exposed to a light source".

2.2 Claim 2 corresponds in substance to original Claim 3, Claim 3 is based upon a feature of original Claim 4, Claim 4 is based upon the subject-matter of original

Claims 5 and 6, Claims 5 and 6 are based upon features of original Claim 7 and Claim 7 is based upon a feature of original Claim 4.

Sub-claims 5 to 7 have been introduced with the wording "The combination according to ..." instead of the introduction "A decorative covering ..." of the original Claims 4 and 7 upon which Claims 5 to 7 are based. Since Claims 5 to 7 are fully dependent claims and reference Claim 4 explicitly refers to a "combination" comprising all features of Claim 4, the cited amendment to Claims 5 to 7 is to be regarded as a clarification under Article 84 EPC.

2.3 All claims are acceptable under Article 84 and 123(2) EPC and no objections arise concerning the other formal requirements of the EPC.

### 3. Novelty

The search report has not revealed any document concerning a decorative carpet. None of these documents is, therefore, suitable to destroy novelty of the carpet according to Claim 1. Besides, since novelty has not been questioned in the reasons for the decision under appeal, there is no need for further detailed substantiation of this matter.

Therefore, the subject-matter as set forth in Claim 1 is novel in the sense of Article 54 EPC.

### 4. Inventive step

4.1 No document disclosing all the features of the precharacterising portion of Claim 1 has been revealed.

A decorative carpet having a backing and a pile, the pile having a first end portion affixed to the backing and extending to a second end portion remote from the backing,

is, however, generally known, such prior art having also been acknowledged by the Appellant (cf. description, page 1, last paragraph, to page 2, paragraph 1). In the opinion of the Board, a decorative carpet according to the first portion of Claim 1 constitutes the nearest prior art since it concerns the kind of product for which protection is sought and in which the particular problem underlying the invention arises (cf. items 4.2 and 4.3 below).

- 4.2 When comparing the above-cited known decorative carpet to the carpet according to the characterising features of Claim 1, the effect obtained in the Appellant's contention is that the fibre optic cables are clearly visible when lit up but do not project beyond the pile so as to be subject to damage. Furthermore, the fibre optic cables as they run from the light source to the pile are arranged such that cracking or other damage caused to the cables is prevented.
- 4.3 It is credible to the Board that these effects may in fact be attained by the invention; they could, therefore, be taken into account in determining the inherent problem to be solved.

The problem may, therefore, be seen in providing a decorative carpet with a novel decorative effect which is operative only when desired, without affecting the functional nature or tactile characteristics of the carpet, and also without affecting its visual appearance when the novel decorative effect is inoperative.

The fibre optic cables exposed to a light source are clearly visible only when lit up. Thus, the visual appearance of the carpet is not affected when the light source is inoperative. As the cables have first end portions coterminous with the second end portion of the pile and extend in a curve through the backing, damage

caused to the cables, e.g. by the weight of people walking on the carpet, may be prevented.

4.4 It remains, therefore, to be examined whether the claimed solution is obvious to the skilled person in view of the state of the art.

4.4.1 US-A-3 758 771 (D1) was considered by the Examining Division to reflect the relevant prior art upon which the decision on appeal was exclusively based.

D1 discloses a decorative covering in a wig, the wig having a wig cap to which groups of hair are attached, the hairs having first end portions affixed to the wig cap and extending to second end portions remote from the wig cap. A plurality of fibre optic cables upstanding from the wig cap are provided, the fibre optic cables having first end portions coterminous with the second end portions of the hairs and the cables extending in a curve through the wig cap to second portions of the cables exposed to a light source.

The problem underlying the illuminated wig known from D1 is to provide a novel decorative wig having light-emitting flexible fibres interspersed through the wig hair and which appear very much like hair and may be combed together with the hair, the wig being comfortable and not cumbersome to wear (cf. column 1, lines 3 to 31 of D1).

This problem is different from that underlying the invention (cf. above item 4.3). In particular, the aspect of the problem according to the invention that the means providing the decorative effect of the carpet should not be damaged during normal use of the carpet, e.g. by the weight of persons or items of furniture, is absolutely foreign to issues arising with wigs.

Thus, with regard to a potential identity or similarity of the inherent problems, there is no reason for the skilled person confronted with the cited problem of the invention to search for solutions in the field of illuminated wigs.

4.4.2 Claim 1 is directed to a carpet having a backing and a pile. The technical field of the invention is, therefore, the field of carpeting and the competent person skilled in the art is a person working in this field, in neighbouring fields and in a broader general field of which the specific field is part (cf. Decision T 176/84 of 22 November 1985, OJ EPO 2/1986, 50).

Having regard to carpeting, the field of wigs can neither be regarded as a neighbouring field nor as a broader general field of which the specific field is part. Therefore, the skilled person would also, seen from the viewpoint of related technical fields, have no reason to investigate solutions disclosed in the art of wigs.

4.4.3 The Examining Division argues in its Decision with regard to the feature of Claim 1 that the cables extend in a curve through the backing of the carpet that this feature is evident from Figures 2 and 3 of D1.

In the view of the Board, such a correspondence with regard to this feature between Claim 1 and the disclosure of D1 cannot be duly established without taking account of the question whether the problems underlying the respective features are similar.

In this respect, D1 (cf. column 2, last paragraph, to column 3, line 47) discloses that the fibre optic cables have the appearance and texture of hair, comb as hair, and as they are flexible like hair their light-emitting ends

sway or pivot about the holes in the wig cap through which the cables are passed.

From this, it must be concluded that the curves in which they extend as shown in Figures 2 and 3 of D1 are random configurations dependent upon the position and movement of the neighbouring hair with which the cables are in supporting relation, such configurations resulting from the requirement that the cables have the appearance and texture of hair. Therefore, the curve-configuration of the cables in D1 serves a different purpose as compared to that of the invention.

Thus, D1 does not provide any hint at extending the cables in a curve through the backing to prevent cracking or other damage being caused to the cables. Such a hint has not even been provided in D1 with regard to the possibility of cracking or other damages being caused to the cables in combination with the wig dealt with, let alone with regard to a carpet.

Starting from a carpet according to the preamble of Claim 1, at least two steps were required to arrive at the subject-matter of Claim 1.

In the first place, the idea had to be realised that the concept of including fibre optic cables in carpeting on the ground was feasible despite the danger arising from damage caused to the cables.

Secondly, particular measures had to be taken to obtain a practicable carpet of useful lifespan, i.e. to arrange the outer end portions of the cables coterminous with the pile surface and to extend the cables in a curve through the carpet backing for the purpose of avoiding or reducing damage caused to the cables.

Since none of these steps were suggested by D1, the Board considers that the subject-matter of Claim 1 is not obvious from this citation.

4.4.4 Having regard to the other documents cited in the search report, the following is observed:

US-A-4 110 818 (D2) concerns an illuminated flag comprising fibre optic cable means, one end of the cable means being disposed to receive light energy, the other end thereof being distributed such that the free ends of the individual fibre optic filaments are disposed along the lateral flag surface so as to be visually accessible to a user and arranged such that said free ends form indicia.

US-A-4 034 215 (D3) concerns a decorative light display comprising a plurality of fibre optic spray assemblies each including a lamp and optical fibres. Means responsive to an audio input signal for supplying power to the lamps is provided, said power varying with variations in the audio signal.

DE-A-2 806 076 (D4) discloses a lamp comprising a bundle of optical fibres, a light source associated with one end of the bundle and a device for changing colour disposed between said end of the bundle and the light source. The purpose is to create lamps having image-like effects for an extended range of application.

The publication "Wireless World, Vol. 88, No. 1555, April 1982, pages 36-40; J.D.H. White et al.: "Microprocessor-Controlled Lighting Systems" (D5) deals with a system designed to simplify the control of complex lighting patterns as used in stage and theatre lighting by means of a microprocessor.

The documents D2 to D5 are not concerned with carpets comprising fibre optic cables for obtaining decorative effects and the particular problem arising from the practical use of such a carpet due to the imposed loads. These documents are not, therefore, more relevant than D1 and do not render obvious the subject-matter of Claim 1, either taken individually or in combination with D1.

- 4.5 For the foregoing reasons, the Board has come to the conclusion that the subject-matter of Claim 1 involves an inventive step (Article 56 EPC).
- 4.6 The dependent Claims 2 to 7 relate to further embodiments of the invention : they are not open to objection.
5. The description and drawings are in agreement with the wording of the claims. The description also complies with Rule 27(1) 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 following documents:

Claims: 1 to 7 filed on 21 February 1991.

Description: pages 1, 2, 3, 4 filed on 3 April 1991;  
page 2a filed on 19 September 1988.

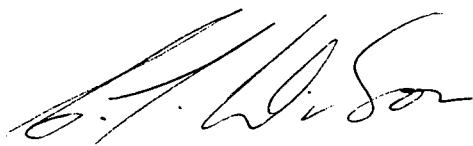
Drawings: Figures 1 and 2 as originally filed.

The Registrar:

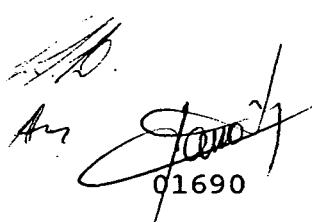


N. Maslin

The Chairman:



C.T. Wilson



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