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Datasheet for the decision of 5 October 2006

Case Number: T 0785/03 - 3.2.05

Application Number: 95912915.6

Publication Number: 0751719

IPC: A41D 1/00

Language of the proceedings: EN

Title of invention:
Low friction apparel

Patentee:
GUNN, Robert T.

Opponents:
E.I. Du Pont de Nemours & Company, Inc.
Falke KG

Headword:
-

Relevant legal provisions:
EPC Art. 83

Keyword:
"Sufficiency of disclosure (no)"

Decisions cited:
-

Catchword:
-

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Case Number: T 0785/03 - 3.2.05

D E C I S I O N
of the Technical Board of Appeal 3.2.05
of 5 October 2006

Appellant: (Patent Proprietor)
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Decision under appeal:
Decision of the Opposition Division of the European Patent Office posted 13 May 2003 revoking European patent No. 0751719 pursuant to Article 102(1) EPC.

Composition of the Board:

Chairman: W. Moser
Members: P. Michel
W. Widmeier

Summary of Facts and Submissions

I. The appellant (patentee) lodged an appeal against the decision of the Opposition Division revoking European Patent No. 0 751 719.

The Opposition Division held that the subject-matter of the independent claims of all requests of the appellant did not meet the requirements of either Article 123(2) or 123(3) EPC.

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

A15: ASTM G 115-93 "Standard Guide for Measuring and Reporting Friction Coefficients", May 1993

B3: Fax from the University of Massachusetts dated 17 September 2003 together with a copy of ASTM protocol D 1894-95, December 1995, "Standard Test Method for Static and Kinetic Coefficients of Friction of Plastic Film and Sheeting"

B9: "DuPont documents and discussion of Sled Tests for COF"

B10: Letter from Richard B. Van Curen of Artech Testing, L. L. C., dated 18 September, 2003

III. Oral proceedings were held before the Board of Appeal on 5 October 2006.

IV. The appellant requested that the decision under appeal be set aside and that the patent be maintained on the

basis of the following documents filed on 24 September 2003:

(a) claims 1 to 11 as main request; or

(b) claims 1 to 10 as first auxiliary request.

Respondents I and II (opponents 01 and 02) requested that the appeal be dismissed.

V. Claim 1 of the main request of the appellant reads as follows:

"1. An article of clothing which is adapted to be directly or indirectly in contact with a body surface of a user,
at least an area of said article being treated to reduce frictional contact between the article and the body surface of the user and/or to reduce frictional contact between an outer surface of said article and a surface of an external object,
a coefficient of friction is imparted to the treated area which is less than the coefficient of friction of an untreated area
characterized in that
the treated area has a coefficient of friction which is less than 80 % of the coefficient of friction of the untreated area, and
the coefficient of friction is imparted to the treated area by incorporating a material having a low coefficient of friction into the area
- by weaving or knitting a material having a low coefficient of friction characteristic into said treated area, and/or
- by coating a surface of said treated area with polytetrafluoroethylene."

Claim 1 of the auxiliary request differs from claim 1 of the main request in that the claim additionally specifies that "the article is treated in a specific area of high article outer surface to external object contact and/or treated in a specific area of high body surface to article contact, such that said specific area has a coefficient of friction which is less than 80% of the coefficient of friction of an untreated area".

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

At the priority date of the patent in suit it was generally accepted by universities and commercial organizations that a modified sled test according to ASTM D-1894 (included in document B3) should be used to determine the coefficient of friction of materials. This is confirmed by document B10. This was the only test available at the priority date of the patent in suit.

Claim 1 of both requests merely requires that a comparison be made between treated and untreated areas of the article. It is thus not necessary to determine the absolute values of the coefficient of friction. It is thus not relevant which test method is used, since the coefficient of friction for both the treated and untreated areas of the article are determined using the same method.

In the table at page 10 of document B9, it can be seen that, for white terry, the treated material has a

static coefficient of friction which is 75% of that of the untreated material, and a dynamic coefficient of friction which is 73% of that of the untreated material. For non-terry, the corresponding values are 61% and 60%. This demonstrates that, whilst the absolute values differ, nevertheless, the ratio of the coefficient of friction between treated and untreated areas of the article is consistent. Similar results are obtained from the table at page 9 of document B9.

The choice of another test method, whilst possibly giving rise to different absolute values, would not affect the ratio of the coefficient of friction between treated and untreated areas of an article.

The invention is thus disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art.

VII. Respondents I and II argued substantially as follows in the written and oral procedure:

Document A15 at page 488 sets out the minimum data required in order to specify the coefficient of friction of a material. These include the reference material, whether static or kinetic coefficient of friction is measured, whether the inside or outside surface of the material is tested, and which test is used. The patent in suit does not disclose any information regarding the test method. It is accordingly necessary to make an arbitrary choice of method.

There is no systematic relationship between static and dynamic coefficient of friction. This is illustrated by the tables in document B9, at pages 2 and 3. Similarly, these tables also illustrate that the choice of surface also leads to contradictory results.

Document B10 states, in the second paragraph, that none of the standard test methods are suitable and that it was necessary to develop a new testing machine. The letter is dated 18 September 2003, that is, after the priority date of the patent in suit. There was thus no suitable standard test method at the priority date of the patent in suit.

There exist three options as regards the test configuration (cf. Fig. 3 at page 486 of document A15), and there remains an arbitrary choice as to the material and weight of the sled. All these factors will affect the results obtained as well as the relative values resulting from a comparison of two samples.

The wide distribution of results a shown in the table at page 3 of document B9 also prevents repeatable relative values of the coefficient of friction from being obtained.

The invention is thus not disclosed in a manner sufficiently clear and complete to enable it to be carried out by a person skilled in the art.

Reasons for the Decision

Sufficiency of disclosure

The patent in suit does not indicate whether the references to a coefficient of friction refer to a static or dynamic coefficient of friction. The importance of this is illustrated by the table at page 3 of Document B9. This shows that, for a sample sock under the same test conditions, the average dynamic coefficient of friction for the inside of a sock is greater at the heel than at the toe (0.160 as opposed to 0.108). The opposite is the case for the static coefficient of friction (0.166 as opposed to 0.239). Similarly, a comparison from the same table of the coefficient of friction at the toe of the sock gives an average dynamic coefficient of friction for the outside of the sock which is greater than at the inside of the sock (0.150 as opposed to 0.108). The opposite is the case for the static coefficient of friction (0.180 as opposed to 0.239). It is then noted beneath the table that it was agreed to use inside sock data and dynamic coefficient of friction. These are arbitrary choices. In the patent in suit there is no indication as to which choices should be made.

Whilst it was pointed out on behalf of the appellant that this table does not compare treated with untreated areas, the results shown in this table nevertheless indicate that, in the absence of an indication of whether static or dynamic coefficient of friction is intended, it is not possible to determine whether or not the condition that one sample has a coefficient of

friction which is less than 80 % of the coefficient of friction of another sample is satisfied.

The patent in suit is also silent as regards the conditions under which the coefficient of friction should be measured, such as the selection of a reference surface, humidity and temperature, the force to be applied normally to the contacting surfaces (this factor is referred to at page 1 of document B9), and to what extent the sample is under tension.

It is suggested on behalf of the appellant that a person skilled in the art would understand that the coefficient of friction should be measured by the sled test developed by E. I. Du Pont de Nemours & Company on the basis of the ASTM protocol included in document B3 for use with plastic film and sheeting. However, whilst such a test may have been widely used, the person skilled in the art at the filing date of the patent in suit would not inevitably have used such a test. Document B10 merely states that "ASTM D-1894 … was the closest pertinent test available in this country". Even if this test were to be used, the patent in suit does not give any indication which would enable a person skilled in the art to determine what set of conditions should be used.

Claim 1 of both requests of the appellant specifies that "the treated area has a coefficient of friction which is less than 80 % of the coefficient of friction of the untreated area". In order to carry out the invention it is thus necessary to treat an area of the article such that its coefficient of friction is reduced to less than 80 % of that of the untreated

areas. Whilst this does not require an absolute value of the coefficient of friction to be determined, it does require that reasonably consistent results for the relative value can be obtained, regardless of the method used and regardless of whether static or dynamic coefficient of friction is to be measured. As set out above, this is not the case.

The patent in suit thus does not provide a sufficient disclosure to enable the invention to be put into practice, and the requirements of Article 83 EPC are not satisfied.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

D. Meyfarth W. Moser