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D E C I S I O N
of 5 August 2004

Case Number: T 0433/03 - 3.2.7

Application Number: 96942067.8

Publication Number: 0874717

IPC: B24D 9/08

Language of the proceedings: EN

Title of invention:
Backing plates for abrasive disks

Applicant:
NORTON COMPANY

Opponent:
-

Headword:
-

Relevant legal provisions:
EPC Art. 54, 84, 111(1), 123(2)

Keyword:
"Novelty - yes, after amendment"
"Remittal to first instance - yes"

Decisions cited:
-

Catchword:
-

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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0433/03 - 3.2.7

D E C I S I O N
of the Technical Board of Appeal 3.2.7
of 5 August 2004

Appellant: NORTON COMPANY
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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 22 November 2002 refusing European application No. 96942067.8 pursuant to Article 97(1) EPC.**

Composition of the Board:

Chairman: A. Burkhart
Members: P. A. O'Reilly
C. Holtz

Summary of Facts and Submissions

I. The appellant (applicant) filed an appeal against the decision of the Examining Division to refuse the European application No. 96 942 067.8.

II. The application was refused by the Examining Division for lack of novelty.

The most relevant prior art document for the present decision is:

D1: US-A-2 749 681

III. The appellant requested that the decision under appeal be set aside and a patent be granted on the basis of claims 1 to 10 labelled "New main request" as submitted in the oral proceedings on 5 August 2004.

The appellant agreed that the case could be remitted to the first instance for further prosecution to give the appellant the possibility of further examination by two instances.

IV. The independent claim of the main and sole request reads as follows:

"1. An abrasive disk backing plate having a mounting aperture and an abrasive disk-bearing surface, said plate being made of a resilient material and being circular characterised in that it features at least three spaced and symmetrically disposed gaps distorting the circumference of the said plate from a circular

shape, and the said gaps have the shape of a portion of a circle or the shape of a segment of a circle."

V. The appellant argued in written and oral submissions essentially as follows:

The disk disclosed in document D1 is not a backing disk. The disk is the equivalent of the sanding disk disclosed in the application in suit which must be used with a backing disk.

Document D1 does not disclose just one disk-bearing surface as is presently claimed. It is quite clearly stated with respect to figure 2 that both sides are covered with grinding material. The part of the description which refers to one or both sides cannot be combined with the description of Figure 2. If necessary, the wording of claim 1 can be amended to be unambiguously limited to a single disk-bearing surface.

There is no unambiguous disclosure that the material of the disk in document D1 is resilient. A thin sheet of metal is not automatically resilient.

Document D1 does not disclose symmetrically disposed gaps in the circumference in the sense of the application. The slots or incisions mentioned in document D1 do not have any cooling effect and the skilled person would not recognise such an effect. This is supported by the declaration of Dr Gogu.

Document D1 is not an enabling disclosure. If the disk taught in document D1 is used in an angle grinder the disk disintegrates and hence does not work.

The features of claim 1 that the gaps may be in the shape of a portion of a circle or the shape of a segment of a circle is not disclosed in document D1.

Reasons for the Decision

1. *Admissibility of the amendments*

1.1 Compared to the claims examined by the Examining Division claim 1 contains the additional features of claims 2 and 3 as well as a statement that the gaps are distorting the circumference of the said plate from a circular shape.

1.2 The Board considers the amendment to claim 1 to have been disclosed in the application as filed and hence to satisfy the requirements of Article 123(2) EPC. Claims 2 and 3 were present in the application as filed as claims 2 and 3. Claim 1 as originally filed did not have a reference to the plate as being of resilient material. This feature was in claim 10 as originally filed which was dependent on claim 1. Thus each of the features of claim 1 is *per se* disclosed in the application as filed. It remains to be considered whether the features were disclosed in combination. The combination is not explicitly derivable from the originally filed claims. There are a number of

references in the description to the resilience of the material of the backing plate. There is in particular a general reference to the resilience of the backing disks of the invention on page 23, lines 24 to 25 of the application as filed. The Board concludes that this means that backing disks of resilient material can be provided with all the shapes of the backing disks that are disclosed. This means that the combination of features of claim 1 as amended was disclosed in the application as filed. In the view of the Board the statement that the gaps are distorting the circumference of the said plate from a circular shape is no more than an inevitable consequence of providing the gaps in the circumference so that it was also disclosed in the application as filed.

1.3 The Board also considers that claim 1 as amended is clear as required by Article 84 EPC. The geometrical expressions "portion of a circle" and "segment of a circle" are well defined expressions in geometry.

2. *Novelty*

2.1 The question has been disputed by the appellant as to whether disk *a* disclosed in document D1 constitutes an abrasive disk backing plate in the sense of claim 1. According to the description of the application in suit the backing plate is for use in backing, i.e. supporting, a sanding disk. The sanding disk must be fixed to the backing plate. This fixing may be effected, for instance, by projections 805 (see page 28, lines 22 to 25 of the application as filed) or a peg 603, 604 (see page 24, lines 17 to 21 of the application as filed) whereby the orientation apparently should be

preserved or by adhesive (page 31, line 25). The sanding disk may be formed of fibres, or of film, paper or even metal (page 27, lines 14 to 25 of the application).

According to document D1 the cloth backing *c* is stuck onto surfaces of the disk *a*. The disk *a* of document D1 therefore plays the same role as the backing plate according to claim 1 of the application in suit. In both cases some form of attachment of the abrasive carrier is necessary. In document D1 the thin backing covered with a grinding material is given as an alternative to what was at that time a conventional grinding wheel formed of abrasive material. The grinding disc disclosed in document D1 was not intended to be used with a further backing plate, i.e. that it would be the equivalent of the sanding disk referred to in the description of the application in suit.

The Board therefore concludes that document D1 discloses a backing plate.

2.2 The appellant argued that document D1 did not disclose an abrasive disk-bearing surface in the sense of claim 1 and offered, if necessary, to amend claim 1 to unambiguously claim only one surface. Such amendment would not help however as the Board considers that document D1 discloses either one or two such surfaces and hence only one such surface. In column 2, lines 47 to 56 the characteristics of the invention of document D1 are set out. These characteristics include that the thin sheet is covered on one or both faces with grinding material. In column 3, lines 17 to 22 a specific embodiment of the invention is disclosed. In

that embodiment both faces are covered with grinding material. The fact that the embodiment has two faces covered with grinding material is consistent with the general statement that one or both faces may be covered. An embodiment by its nature will always be more specific than the general statement of the invention. The claims of document D1 are also consistent with this view. There are three independent claims, namely claims 1, 6 and 8. Claim 1 does not state the number of sides that are coated though its dependent claim 2 specifies that two sides are coated. Claim 6 does not mention the number of sides coated. Claim 8 specifies that one or both sides are coated with a relatively dark abrasive material. Thus, none of the independent claims of document D1 contain a limitation to two sides being coated. The claims of document D1 are consistent with the teaching that one or both sides may be coated. The Board concludes therefore that the feature of claim 1 of the application that the "backing plate having … an abrasive disk-bearing surface" is disclosed in document D1.

2.3 The appellant has expressed the opinion that the material disclosed in document D1 for the disc is not resilient. The Board would first of all note that virtually all materials are to some extent resilient, depending upon the amount of deformation to which they are subjected. No definition of resilient is given in the description of the application. On page 24, lines 1 to 2 reference is made to a resilient compound such as rubber or a plastics material. On page 31, lines 23 to 24 reference is made to "a thick, foam-filled (so that it is soft and resilient) backing plate". These however are specific examples to which claim 1 has not been

limited. The Board concludes therefore that the steel of the disk disclosed in document D1 is a resilient material.

2.4 The appellant was further of the opinion that document D1 does not disclose at least three spaced and symmetrically disposed gaps distorting the circumference of the said plate from a circular shape. Document D1 discloses in Figures 1a and 1b two embodiments with incisions *e* and slots *h* respectively. These slots and incisions start on the circumference and extend radially inwardly. In each case there are more than three such incisions or slots and their arrangement is symmetrical. According to the description of the application on page 3 a gap means an indentation or invagination which is incompletely surrounded by the material of the object. The incisions or slots disclosed in document D1 comply completely with this definition of a gap. The Board concludes therefore that the feature that at least three spaced and symmetrically disposed gaps distorting the circumference of the said plate from a circular shape is disclosed in document D1.

2.5 The appellant has argued that document D1 is not an enabling disclosure. The appellant considers a non-enabling disclosure to be one where the use of the disclosed device may in certain situations lead to undesirable results. However, the appellant has not disputed that the description of the document is sufficient to enable the device to be constructed. The Board concludes therefore that document D1 contains an enabling disclosure.

2.6 With regard to the declaration of Dr Gogu the questions posed to the expert are not relevant to the question of the novelty of the subject-matter of claim 1. The first question relates to a significant temperature drop in the work piece which the expert then quantified as "plusieurs dizaines ºC". Claim 1 does not however contain any indication of the quantity of temperature drop. Moreover, the temperature drop is in fact a comparison with the prior art and not a feature of device of the application so that it cannot be taken into account when considering novelty. The second question concerns what the skilled person would spontaneously think concerning document D1. Such a question is not relevant to the disclosure of document D1.

2.7 The Board concludes that the features of claim 1 whereby the gaps have the shape of a portion of a circle or the shape of a segment of a circle are the only features which are not disclosed in document D1. The slots or incisions disclosed in document D1 have a linearly elongated form oriented in a generally radial direction. The straight sides of the slots or incisions mean that they do not have the shape of a circle. A segment of a circle is specified on page 3 of the application as being the portion of a circle between a chord and the perimeter. This is indeed the standard geometrical definition of a segment of a circle. None of the slots or incisions disclosed in document D1 has a chord as a part thereof so that a gap in the shape of a segment of a circle is not disclosed in document D1.

2.8 Therefore, the subject-matter of claim 1 is novel in the sense of Article 54 EPC.

3. *Inventive step*

3.1 As the first instance has not yet expressed a reasoned opinion with regard to inventive step the Board does not consider it appropriate to give an opinion.

4. *Remittal to the First Instance*

4.1 The Examining Division has not yet examined claim 1 (as amended during appeal proceedings) with regard to inventive step. In accordance with Article 111(1) EPC, the Board therefore considers it appropriate to remit the case to the first instance so as to give the appellant the possibility to argue the case before two instances.

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 for further prosecution.

The Registrar: The Chairman:

G. Nachtigall A. Burkhart