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D E C I S I O N
of 19 January 1999

Case Number: T 0632/98 - 3.2.4

Application Number: 94200778.2

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Language of the proceedings: EN

Title of invention:
Conveyor table

Applicant:
Hadewe B.V.

Opponent:
-

Headword:
Conveyor/HADEWE

Relevant legal provisions:
EPC Art. 56

Keyword:
"Inventive step (yes)"

Decisions cited:
-

Catchword:
-



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Boards of Appeal

Chambres de recours

Case Number: T 0632/98 - 3.2.4

D E C I S I O N
of the Technical Board of Appeal 3.2.4
of 19 January 1999

Appellant:

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Representative:

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Decision under appeal:

**Decision of the Examining Division of the
European Patent Office posted 9 February 1998
refusing European patent application
No. 94 200 778.2 pursuant to Article 97(1) EPC.**

Composition of the Board:

Chairman: C. A. J. Andries
Members: P. Petti
M. Lewenton

Summary of Facts and Submissions

I. The European patent application No. 94 200 778.2 filed as a divisional application on application No. 90 203 284.6 (hereinafter parent application) and claiming the priority date of 14 December 1989 from the Dutch application NL 8903070 was refused by a decision of the examining division dispatched on 9 February 1998.

The reason the examining division gave for the refusal was that the subject-matter of the independent Claim 1 did not involve an inventive step within the meaning of Article 56 EPC.

II. The appellant lodged an appeal against this decision on 14 April 1998 and simultaneously paid the appeal fee. The statement setting out the grounds of appeal was received on 10 June 1998.

III. In response to a communication of the board, the appellant filed with the letter dated 12 November 1998 amended Claims 1 to 11 and amended pages 2, 5 and 6 of the description.

Claim 1 reads as follows:

"1. A conveyor table for displacing articles with at least one substantially flat side along a transporting surface (4), said table being provided with a support construction (9), a plurality of substantially rotation-symmetrical conveyor members (1) each suspended for rotation about an axis thereof relative to the support construction and circumferential portions thereof defining a plane of transport (4), the direction of transport of said conveyor member (1) being controllable by turning said transport member (1)

relatively to said support construction about a second line (10) perpendicular to the plane of transport (4), a guard (13) arranged parallel to the plane of transport (4), having substantially circular openings (14, 36), at least a number of said openings (14, 36) each having one of said conveyor members (1) extending through them and each of said conveyor members (1) having its corresponding second line (10) extending virtually through the centre of the corresponding opening (14, 36), characterised by means for sucking off air along the conveyor members (1) via said openings (14, 36) through which the conveyor members (1) extend, such that an increased pressure force of an article being conveyed against the conveyor members (1) is obtained."

The correction of a mistake on page 6 of the description, i.e. the re-introduction of the expression "In the embodiment shown in Figs. 2 and 3, the suspension member 8 is of C-shaped construction, leaving one" at the beginning of page 6, was agreed during the conversation by telephone of 16 January 1999.

IV. The appellant requested that the impugned decision be set aside and a patent be granted on the basis of the following documents:

Claims: 1 to 11 as filed with the letter dated 12 November 1998;

Description: pages 1, 3, 4 and 7 to 15 as originally filed;
pages 2 and 5 as filed with the letter dated 12 November 1998;

page 6 filed with the letter dated 12 November 1998 as corrected during the telephone conversation of 16 January 1999;

Drawings: Sheets 1/6 to 6/6 (Figures 1 to 8) as originally filed.

Reasons for the Decision

1. The appeal is admissible.

2. *Amendments*

2.1 The present Claim 1 differs from Claim 1 of the divisional application as originally filed in that the expression

"via said opening (14, 36) through which the conveyor members (1) extend, such that an increased pressure force of an article being conveyed against the conveyor members (1) is obtained"

has been added after the feature "characterised by means for sucking off air along the conveyor member".

This amendment can be derived from a passage on page 1 (lines 19 to 24) of the description of the divisional application as filed.

The subject-matter of the present Claim 1 has also a basis in the parent application as filed (see EP-A-438 820, Claims 1 and 6; column 11, line 58 to column 12, line 9).

2.2 The amendments to dependent Claims 3, 7 and 9 - with respect to the corresponding Claims of the divisional application as filed - concern for Claim 3 the deletion of the reference to claim 2 and for Claims 7 and 9 the change of the expression "according to any one of the preceding claims" to "according to Claim 1 or 2" (in Claim 7) and "according to Claim 7" (in Claim 9). These amendments permit that these dependent claims, which correspond respectively to Claims 3, 8 and 12 of the parent application as filed, comply with Article 76 EPC.

Moreover in Claim 3 the expression "... at least, except for an annular outer portion thereof" was deleted for sake of clarity (Article 84 EPC).

Dependent Claims 2, 4, 5, 6, 8, 10 and 11 are identical with the corresponding claims of the divisional application as filed and have a basis in Claims 2, 4, 5, 7, 9, 13 and 14 of the parent application as filed.

2.3 The amendments of the description consist essentially in the excision of the passage bridging pages 5 (from line 35) and 6 (up to line 6) of the divisional application as filed, passage which did not support the claims (Article 84 EPC).

2.4 The board is satisfied that the amended text of the application as submitted by the applicant does not contravene either Article 76(1), second sentence or Article 123(2) EPC.

3. *The prior art*

The European search report refers to documents EP-A-311 699 (D1), DE-A-1 956 614 (D2) and US-A-1 460 539 (D3).

Each of the documents D1 and D3 concerns a turning table, i.e. a conveyor table provided with a plurality of conveyors members suitable for supporting an article, the conveyor table being suitable for displacing the article along a plane of transport defined by the circumferential portions of the conveyor members, the direction of transport being controllable by turning the conveyor members along an axis perpendicular to the plan of transport. Document D1, which is also cited in the description of the present application, discloses a conveyor table according to the pre-characterising portion of Claim 1. The content of document D3 does not go beyond the content of document D1.

Document D2 concerns a pneumatic transport device for flat articles comprising a suction box connected to a vacuum source, the suction box being provided with rolls (11, 11a, 11b, ...) arranged on the bottom side of the suction box and with a first suction chamber 7 and with a plurality of individually vacuum-operated suction chambers (7a, 7b, ...), each vacuum-operated suction chamber (7a, 7b, ...) having an opening on its bottom side and a closing member (9a, 9b, ...) on its top side. This transport device is suitable for holding an article lifted against the suction box.

4. *Novelty*

The subject-matter of independent Claim 1 is novel with respect to the disclosure of each of the documents cited above. This was not disputed by the examining division.

5. *Inventive step*

- 5.1 Document D1 is considered as being the closest prior art.

The subject-matter of Claim 1 differs therefrom in that the conveyor table is provided with **means for sucking off air along the conveyors members via said openings through which the conveyor members extend such that an increased pressure force of an article being conveyed against the conveyor members is obtained.**

Due to this feature, a conveyor table is provided which not only prevents slip and lifting of the conveyed articles, particularly in the case of light, flexible articles but also permits these articles to be conveyed over the conveyor members at relatively high speeds and relatively accurately.

Thus, the problem to be solved is to provide a conveyor table with which light objects can be moved quickly and accurately.

- 5.2 The use of means for sucking off air along the conveyors members via the openings through which the conveyor members extend is not suggested either by document D1 or by document D3.

Document D2 only teaches the use of suction means to hold an article lifted against a suction box. However, this document does not relate to a conveyor system suitable for transporting articles **over a table** problem, i.e. to a conveyor provided with conveyors members supporting the articles to be conveyed due to their own weight, let alone to problems linked thereto.

Thus, the problem that light articles slipping with respect to the conveyor members because of insufficient friction due to their reduced weight cannot be conveyed at high speed does not arise in the conveyor system according to this document.

Therefore, there is no reason why the skilled reason would turn to document D2 when he tries to solve the above mentioned problem.

Thus, having regard to the prior art mentioned above, a skilled person would not be led towards the subject-matter of Claim 1. The subject-matter of Claim 1 meets, therefore, the requirements of Article 56 EPC.

6. Therefore, a patent can be granted on the basis of the independent Claim 1 and of dependent Claims 2 to 11 which concern particular embodiments of the invention defined in Claim 1.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the examining division with the order to grant a patent on the basis of the following documents:

Claims: 1 to 11 as filed with the letter dated 12 November 1998;

Description: pages 1, 3, 4 and 7 to 15 as originally filed;
pages 2 and 5 as filed with the letter dated 12 November 1998;
page 6 filed with the letter dated 12 November 1998 as corrected during the telephone conversation of 16 January 1999;

Drawings: Sheets 1/6 to 6/6 (Figures 1 to 8) as originally filed.

The Registrar:


N. Maslin

The Chairman:


~~E. Andries~~