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File Number: T 61/89 - 3.2.1

Application No.: 82 305 826.8

Publication No.: 0 079 192

Title of invention: Improvements in scraper chain conveyors

Classification: B65G 19/22

D E C I S I O N  
of 15 March 1991

Proprietor of the patent: PARSONS CONTROLS LIMITED

Opponent: 01) Fa. August Thiele  
02) Gewerkschaft Eisenhütte Westfalia GmbH

Headword:

EPC Article 56

Keyword: "Inventive step (denied)"  
"No reply to objections made in a communication by the Board"

Headnote



Case Number : T 61/89 - 3.2.1

**D E C I S I O N**  
of the Technical Board of Appeal 3.2.1  
of 15 March 1991

**Appellant :**  
(Opponent II)

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**Respondent :**  
(Proprietor of the patent)

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**Decision under appeal :**

Decision dated 8 December 1988 rejecting the  
oppositions filed against European patent  
No. 0 079 192 pursuant to Article 102(2) EPC.

**Composition of the Board :**

**Chairman :** F. Gumbel  
**Members :** M. Ceyte  
W. Moser

## Summary of Facts and Submissions

I. European patent No. 0 079 192 comprising four claims was granted on 18 June 1986 in response to European patent application No. 82 305 826.8.

II. Claim 1 of the granted patent is worded as follows:

"1. A scraper chain conveyor having scraper bars (12) secured to endless conveyor chains moveable along pans (9) having inwardly lipped side flanges (8) each scraper bar including a central portion (14) and separate outer portions (16), the central portion having a width across the conveyor less than the distance between opposed edges (10) of inwardly lipped flanges of an upper race (4) thereof, the outer portions being formed with wings (34) arranged to extend outwardly from the central portion closely to adjoin the inner faces of the inwardly lipped side flanges (8) characterised in that the central portion is formed with seatings (17) profiled to conform with and transfer loading to a horizontally disposed link of chain, the outer portions are formed with retaining faces (32) arranged to co-act with the seatings (17) to retain the horizontally disposed link (18) thereupon and bolts (52, 54) respectively positioned inboard and outboard of the conveyor chain each extending through bores (44, 46) in the central portion and the associated outer portion are arranged to secure the central portion to the associated outer portion."

The patent as granted includes further dependent claims 2 to 4.

III. On 10 December 1986 and 17 March 1987 respectively, Opponent 01 and the Appellant/Opponent (02) filed admissible oppositions requesting revocation of the patent on the ground that its subject-matter was not patentable for lack of inventive step, having regard to the prior art

documents cited during the proceedings before the Opposition Division, namely:

- D1: FR-A-1 054 131
- D2: GB-A-796 780
- D3: DE-C-2 031 927
- D4: DE-C-2 608 289.

The Respondent (Patentee) remained silent during the whole opposition proceedings.

IV. By a decision dated 8 December 1988, the Opposition Division rejected the oppositions. In the reasons for that decision it was considered that the subject-matter of Claim 1 was novel and involved an inventive step having regard to the prior art documents cited by the Appellants.

V. On 11 January 1989 the Appellant filed a notice of appeal against that decision and paid the appeal fee. A written statement setting out the grounds of appeal was filed on 21 March 1989.

A further prior art document was introduced for the first time:

- D5: DE-A-1 921 747.

VI. In a communication pursuant to Article 110(2) EPC dispatched on 28 September 1990, the Board informed the parties of its provisional opinion according to which the subject-matter of Claim 1 did not involve an inventive step. The content of the communication in that respect being as follows:

- i) Claim 1 is based on the disclosure of document D1 which discloses a scraper chain conveyor having

scraper bars (1, 10) secured to endless conveyor chains (4, 13) moveable along pans having inwardly lipped side flanges. In the arrangement shown in Figures 4-6 - used as the starting point in Claim 1 - each scraper bar comprises a central portion (10) having a width across the conveyor less than the distance between the inwardly lipped flanges of the upper race.

At each end of the central portion, an outer portion (11) is bolted by means of a horizontal bolt (15) to the central portion and is formed with a wing which closely adjoins the inner faces of the inwardly lipped side flanges.

Each outer portion has a seating (12, 14) arranged to seat in a link (13) of a chain, such that the drive is transmitted from the chain to the outer portion and thence to the central portion of the scraper bar.

This arrangement can lead to failures due either to the outer portion (11) or the bolt (15) failing as a result of excessive loading, such as shock loading transmitted therethrough.

- ii) Hence, the main problem to be solved in respect of prior art document D1 is to overcome the above-mentioned drawback.

This problem appears to be solved by the features specified in the characterising part of Claim 1, i.e. by forming the seatings not on the outer portions but on the central portion, to transmit drive forces directly from the chain to the central portion, thereby minimising the risk of failure. A further characterising feature is that each outer portion is

bolted to the central portion by a pair of bolts (and not by a single bolt) positioned inboard and outboard of the conveyor chain, "thereby distributing and reducing the stress required to hold the outer portions in contact with the central portion" (see respondent's letter filed on 18 January 1985 during the examination proceedings).

The main idea of the claimed solution, however, appears to have already been suggested to the skilled reader in document D5 which likewise describes a scraper chain conveyor having scraper bars secured to endless conveyor chains moveable along pans having inwardly lipped side flanges.

In the arrangement shown in Figure 3 the scraper bar comprises a central portion (1) having an end extension (4') ("Zugbacke") which is welded to the central portion (1). Each end extension of the central portion has a pillar (5') arranged to seat in a chain link (2). The outer portions (11') ("Verschlußbacke") serve as retaining members to hold the chain on the seating (5') but do not serve to transmit load from the chain in any manner. This is clearly indicated on page 3, lines 16-19 of document D5.

Reference is also made to page 6, last paragraph of document D5, where it is stated that only the end extension ("die Zugbacke") transmits the drive from the chain to the central portion (the end extension and the central portion form a one-piece member).

Thus, the provision of the central portion with seatings is intended to solve substantially the same problem as the one underlying the subject-matter of Claim 1.

As a result, it would have been obvious to the skilled person to apply the teaching given in document D5 to the known scraper chain according to Figures 4-6 of document D1.

- iii) The further characterising feature in Claim 1, that the outer portion is bolted by a pair of bolts positioned inboard and outboard of the conveyor chain, does not constitute an inventive step either.

If a skilled person finds that the provision of a single bolt holding the outer portion on the central portion has certain disadvantages, e.g. that the chain conveyor is liable to structural failure due to excessive stresses in the bolt and/or its bearing surfaces, he will consider alternative solutions to remedy this deficiency. He could then be expected to bolt the outer portion by means of a pair of bolts which may be positioned inboard and outboard of the chain so that failure becomes less likely. Thus, the provision of a pair of bolts appears to form part of the general engineering knowledge which a priori is to be attributed to any mechanical engineer.

VII. In its communication the Board further pointed out that document D5, although only submitted by the Appellant in the written statement setting out the grounds of appeal, had to be taken into account under Article 114(1) EPC because of its relevance.

VIII. The Respondent, who was silent during the whole proceedings before the Opposition Division and also did not file any submission in reply to the statement setting out the grounds of appeal, failed, within the time limit allowed, to file observations on the Board's communication.

The Board interprets the Respondent's silence as a request that the appeal be dismissed.

- IX. The Appellant requested that the decision under appeal be set aside and the patent be revoked in its entirety. Furthermore, as an auxiliary request, he asked for oral proceedings to be held.

**Reasons for the decision:**

1. The appeal complies with Articles 106 to 108 and Rule 64 EPC and is, therefore, admissible.
2. The Respondent was invited to file observations on the Board's communication within a period of three months. The Respondent has not availed himself of this opportunity to refute the arguments on lack of inventive step contained in the Board's communication. Hence, these arguments are still valid.
3. In the Board's view the Respondent has had sufficient opportunity to submit his comments in the sense of Article 113(1) and there is no reason to offer the Respondent another opportunity to comment.
4. Since on re-consideration of the case the Board did not arrive at a different assessment concerning the crucial issue of inventive step, it comes to the conclusion that for the reasons given in the Board's communication (see point VI above) the subject-matter of Claim 1 lacks an inventive step and the claim accordingly fails to comply with Articles 52(1) and 56 EPC.
5. Claims 2 to 4 are also not allowable merely in view of the formal reason of their dependence on unallowable Claim 1.

Moreover, the Respondent has not submitted any request to amend Claim 1 e. g. by adding features contained in any of the dependent claims.

6. From all this it follows that the decision under appeal has to be set aside and the patent revoked. Under these circumstances the arrangement of oral proceedings was not necessary.

Order

For these reasons, it is decided that:

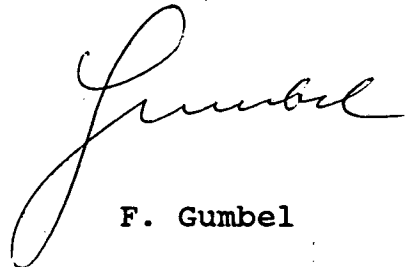
- The decision under appeal is set aside.
- The European patent No. 0 079 192 is revoked.

The Registrar:



S. Fabiani

The Chairman:



F. Gumbel