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**Datasheet for the decision
of 11 October 2013**

Case Number: T 1479/10 - 3.2.01

Application Number: 99121725.8

Publication Number: 1010558

IPC: B60J 5/06, E05F 15/14,
B60R 16/02

Language of the proceedings: EN

Title of invention:
Sliding door system for vehicles

Patent Proprietor:
Chrysler LLC

Opponents:
Leoni Wiring Systems France
Igus GmbH
Yazaki Corporation

Headword:
-

Relevant legal provisions (EPC 1973):
EPC Art. 56

Keyword:
"Inventive step: NO"

Decisions cited:
-

Catchword:
-



Case Number: T 1479/10 - 3.2.01

DECISION
of the Technical Board of Appeal 3.2.01
of 11 October 2013

Appellant:
(Opponent 02)

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Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted
7 May 2010 concerning maintenance of European
patent No. 1010558 in amended form.

Composition of the Board:

Chairman: G. Pricolo
Members: H. Geuss
D. T. Keeling

Summary of Facts and Submissions

- I. The appeal of the opponent 02 is directed against the interlocutory decision posted 7 May 2010 maintaining European Patent No. 1010558 in amended form.
- II. The opposition division held that the subject-matter of claim 1 as amended in opposition proceedings involved an inventive step, having regard to documents

JP 10-936 (E3) and
JP 09-278293 (E4).

- III. During oral proceedings before the Board of Appeal held on 11 October 2013 the appellant (**opponent 02**) requested that the decision under appeal be set aside and that the patent be revoked.

The respondent (patent proprietor) requested that the appeal be dismissed.

No one appeared for the other parties (opponent 01 and opponent 03). Opponent 03 requested in writing that the patent be revoked. No requests were filed by opponent 01.

- IV. Claim 1, as amended during the opposition proceedings, reads as follows:

A sliding door system for a vehicle (10), comprising: a vehicle body (12) having an opening (14); one or more guide tracks (26,28) attached to the vehicle body (12) adjacent the opening (14), whereby the one or more guide tracks (26,28) are non-linear;

a sliding door (24) slidably attached to the guide tracks (26,28); electrical wires (50) for electrically coupling the vehicle body (12) and the sliding door (24); a wire track assembly (46) having electrical wires (50); and a sheathing (52) for receiving and housing the electrical wires (50) for electrically coupling the vehicle body (12) and the sliding door (24); said sheathing (52) being bendable transversely relative to the longitudinal axis of the wire track assembly; characterized by .
the sheathing having a plurality of main body links (54), each main body link (54) having a first round retaining wall (56) and a second round retaining wall (58) at a first end, and a first elliptical aperture (60) and a second elliptical aperture (62) at a second end, the first and the second elliptical apertures (60,62) having a slightly larger diameter than the first and the second round retaining walls (56,58), whereby a main body link's first end can fittingly engage another main body link's second end.

V. The appellant's submissions may be summarized as follows:

The subject-matter of claim 1 does not involve an inventive step. The features of the preamble of claim 1 are shown in document E3. Furthermore, E3 discloses all the features of the characterizing portion except the feature that first and second elliptical apertures are provided at the second end.

The problem solved by means of the distinguishing feature is to provide a sliding door system with an improved protection of the wired connection between the

car body and the sliding door, cf. description paragraph [0010].

In order to solve this problem, a skilled person would consider known cable carrier chains and, in particular, would turn to document E4 which discloses a cable carrier chain (figures 3, 5 and 6) with a main body link element (cf. figure 4) for protecting a "linear type material", as for example a cable (cf. translation of E4 according to E4b, paragraph [0001]; E4b was filed by the appellant with letter dated 24 February 2012).

The main body link according to E4, figure 4, is provided with a circular hole which corresponds to the elliptical apertures as defined in contested claim 1, since a circle represents a special case of an ellipse in which the major and the minor axis have the same values. The patent specification neither defines values for the major and minor axis nor for a relation between major and minor axis. The sole information in the patent specification is in figures 5 and 6, showing a *circular* aperture and further, the respective feature in claim 1 defining that the first and second elliptical apertures have a "*diameter*". However, "*diameter*" is a parameter used for the description of a circle, not for an ellipse having major and minor axes.

Furthermore the description is silent about a specific effect of an elliptical aperture vis-à-vis an oval hole which permits no vertical play between main body links when engaged, respectively vis-à-vis a circular hole as disclosed in E4 which permits an equal play in all directions.

In summary, since in the whole patent specification there is no hint that the circle as specific form of an ellipse is excluded from the scope of claim 1, a main body link element according to the features of the characterizing part of claim 1 is disclosed in E4.

With regard to the feature that an elliptical aperture is provided in accordance with claim 1 on both sides of the main body element, this feature cannot justify an inventive step. A skilled person would obviously consider providing identical elliptical apertures on both sides in order to improve the bending properties of the cable carrier chain.

VI. The respondent's rebuttal was essentially the following:

The subject-matter of claim 1 as amended in opposition proceedings is inventive. The main difference between the sliding door system according to E3 and the subject-matter of claim 1 concerns the elliptical apertures in the main body link element, which are on both sides.

The problem to be solved by these features is to improve the protection of the wired connection between the car body and the sliding door as described in paragraph [0010] of the patent specification.

Document E4 discloses interconnected body links for a winding machine. E4 does not disclose or suggest an arrangement wherein a wire track assembly has a plurality of links engagable with each other in such a manner that allows the wire track to bend transversely to its longitudinal axis, so that the wire track

assembly follows the sliding door as it moves non-linearly between its open and closed positions.

Specifically for this purpose in accordance with the invention, a main body element is foreseen with an elliptical aperture on both sides. In contrast to an oval hole, which would not be considered as an ellipse by a skilled person, and which allows no play in the vertical direction, the elliptical aperture provides a clearance in both directions - horizontally and vertically - and thus allows the sheathing to follow a three-dimensional path, thereby bending not only in a vertical plane but also in a horizontal plane to follow the non-linear track of the sliding door.

The elliptical aperture further has the advantage of providing a play in horizontal direction which is greater than in the vertical direction. Since it lacks this feature, a circular aperture as shown in figure 4 of E4 is not suitable to provide a course of movement of the cable carrier chain as required by the non-linear path of the sliding door system.

As a consequence, the features of the characterizing portion of claim 1 define a main body element which allows a three-dimensional movement of the wire track assembly. These features are neither disclosed nor rendered obvious by the state of the art as considered in the proceedings.

Reasons for the Decision

1. The appeal is admissible.

2. Having regard to the state of the art according to documents E3 and E4, the invention as defined in claim 1 as amended during opposition proceedings is obvious to a skilled person. Consequently, the invention as defined in claim 1 as amended during opposition does not involve an inventive step according to Article 56 EPC 1973.
 - 2.1 The features of the preamble of claim 1 are known from document E3. Furthermore, E3 discloses the following features of the characterizing portion:
 - the sheathing has a plurality of main body links;
 - each main body link has a first and a second round retaining wall at a first end;
 - the main body link's first end can fittingly engage another main body link's second end.
 - the first and second apertures have a slightly larger diameter than the first and second retaining walls.

Therefore, the subject-matter of E3 differs from the sliding door system according to claim 1 inasmuch as

- each main body link has a first and a second elliptical aperture at a second end.

The problem to be solved by the distinguishing features is to improve the protection of the wired connection between the car body and the sliding door.

These points are not disputed by the parties. The Board sees no reasons to take a different view.

2.2 The board considers that, starting from E3 as the closest prior art, the provision of elliptical apertures in the main body link elements does not involve an inventive step in view of the document E4.

2.3 The board does not concur with the respondent's argument that in order for the sheathing to follow a three-dimensional movement an elliptical aperture is necessary in that it provides a smaller play in the vertical direction than in the horizontal direction.

The board agrees with the respondent's argument in so far as for a three-dimensional movement, it is necessary that adjacent main body link elements can move both in a horizontal and in a vertical direction. In fact the horizontal movement between two adjacent main body links is delivered by the horizontal play of the retaining wall in the aperture in the engaged state.

However, the bending properties of two adjacent main body links in a vertical direction are provided by rotation of the retaining wall in the hole, formed by the aperture under consideration. Consequently, vertical play, as argued by the respondent is not necessary in order to provide flexibility of the sheathing in a vertical direction.

Furthermore, the board follows the appellant's argument that in the patent specification no particular

technical advantage is described in connection with an elliptical shape of the apertures which goes beyond those of a circular shape. What is needed is only that the apertures allow a certain play. Moreover, the figures of the patent specification show a *circular* hole and the claim specifies a *diameter* for the aperture which is a parameter of a circle. In fact, dimensions or parameters which relate to specific properties of ellipses do not exist in the patent specification. Consequently the board holds that in the present case the specific form of a "circular aperture" is not excluded and in fact is covered by the general definition of "elliptical aperture" in claim 1.

- 2.4 In order to solve the above-mentioned problem the skilled person would turn to E4. Indeed, although E4 does not specifically concern a sliding door system it deals with sheathings for electrical wires in general and deals, in particular, with the same problem as the invention (see paragraph [0007] of E4b). This document describes (see paragraphs [0009] and [0012] of E4b) that electrical wires are better protected if the main body links of the sheathing are allowed to rock in a horizontal plane (see figure 4). The rocking movement is obtained by providing a pin hole 4b larger than the pin 3. Accordingly, the skilled person would implement this feature in the sheathing of E3 in order to obtain the advantage disclosed. He would thus arrive at a sliding door system having a sheathing in which the main body links have circular apertures (these being, as explained above, particular cases of elliptical apertures) of larger diameter than the round retaining walls.

3. Also the fact that an aperture, permitting a play of the retaining wall in the aperture, is provided on both sides of the main body link element is not able to contribute to an inventive activity. The skilled person would immediately realize, that a play on both sides of the main body link element would increase the bending capabilities in the horizontal plane, and obviously provide this feature when desiring to improve the flexibility of the sheathing and thus even better protect the wired connection in E3.

As a result, the skilled person would arrive without an inventive step at a sliding door system according to claim 1.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:

The Chairman:

A. Vottner

G. Pricolo