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**Datasheet for the decision
of 31 July 2018**

Case Number: T 2175/14 - 3.5.03

Application Number: 09012519.6

Publication Number: 2309357

IPC: G05B19/418, A22C15/00

Language of the proceedings: EN

Title of invention:

Robotic device for inserting or removing rod-like elements

Patent Proprietor:

Poly-clip System GmbH & Co. KG

Opponent:

TIPPER TIE technopack GmbH

Headword:

ROBOTIC DEVICE/POLY-CLIP

Relevant legal provisions:

EPC Art. 56

Keyword:

Inventive step - (no)



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Case Number: T 2175/14 - 3.5.03

D E C I S I O N
of Technical Board of Appeal 3.5.03
of 31 July 2018

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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
7 October 2014 concerning maintenance of the
European Patent No. 2309357 in amended form.**

Composition of the Board:

Chairman F. van der Voort
Members: K. Schenkel
O. Loizou

Summary of Facts and Submissions

- I. This case concerns appeals filed by both the opponent and the proprietor against the interlocutory decision of the opposition division in opposition proceedings concerning European patent No. EP 2 309 357.
- II. The opposition division held *inter alia* that, account having been taken of the amendments made by the proprietor in accordance with auxiliary request 3 filed during the oral proceedings, the patent and the invention to which it relates according to this request met the requirements of the EPC.
- III. The appellant-opponent requested in its notice of appeal that the decision under appeal be set aside and that the patent be revoked in its entirety and conditionally requested oral proceedings. In its statement of grounds of appeal, it argued that claim 1 did not comply with Articles 84 and 123(2) EPC and that its subject-matter did not involve an inventive step (Article 56 EPC).
- IV. The appellant-proprietor requested in its statement of grounds of appeal that the decision under appeal be set aside and that the opposition be rejected (main request) or, in the alternative, that the patent be maintained in amended form on the basis of one of the sets of claims of auxiliary requests 1 to 5, in this order, as filed with the statement of grounds of appeal. It further requested oral proceedings.
- V. In a reply dated 23 June 2015, the appellant-opponent filed further arguments based on the grounds for opposition pursuant to Article 100(a), (b) and (c) EPC and Articles 83 and 123(2) EPC.

VI. With a further letter dated 6 July 2015, the appellant-proprietor resubmitted auxiliary request 1, filed a new auxiliary request 2 and renumbered the previous auxiliary requests 2 to 5 as auxiliary requests 3 to 6.

VII. In a communication accompanying a summons to oral proceedings, the board, *inter alia*, indicated that at the oral proceedings it would be necessary to discuss the question of inventive step in respect of the subject-matter of claims 1 and 9 of the main request taking into account, in particular, documents D1 (= EP 1 994 829 A1) and D8 (= WO 2007/005927 A2) and gave the preliminary opinion that the features added in the independent claims of the auxiliary requests did not appear to contribute to an inventive step.

VIII. In response to the board's communication, the appellant-proprietor resubmitted with a letter dated 2 July 2018 auxiliary requests 1 to 6 and submitted further arguments in support.

IX. Oral proceedings took place on 31 July 2018.

The appellant-opponent requested that the decision under appeal be set aside and that the patent be revoked in its entirety.

The appellant-proprietor requested that the decision under appeal be set aside and that the opposition be rejected (main request) or, in the alternative, that the patent be maintained in amended form on the basis of one of the sets of claims of auxiliary requests 1 to 6 as filed with the letter dated 2 July 2018.

At the end of the oral proceedings, after deliberation by the board, the chairman announced the board's decision.

X. Claim 1 of the main request, i.e. claim 1 as granted, reads as follows:

"A method for controlling a robotic device (20) for inserting or removing rod-like elements (R), like smoking bars, into or from a storage frame (30), the rod-like elements (R) serving for storing sausage-like products (S), like sausages, each of which has a sausage-shaped body and a loop on one end of the body for a pendulously storage of the products (S), comprising the steps of:

- providing a movable storage frame (30) comprising at least one tray (32) for temporary storing rod-like elements (R) thereon,
- moving the storage frame (30) into the operating range (60) of the robotic device (20),
- picking up by the robotic device (20) a rod-like element (R) on which at least one sausage-like product (S) is hung up, and
- inserting or removing the rod-like element (R) into or from the storage frame (30) by the robotic device (20),

characterized by providing the storage frame (30) with an at least machine readable label (34) including information as to the storage frame (30) and reading out information from the machine readable label (34) at least before the storage frame (30) is moved into the operating range (60) of the robotic device (20) and sending said information to a control unit (22) of the robotic device (20) for controlling the movement of the

robotic device (20) while inserting or removing rod-like elements (R) into or from the storage frame (30), and wherein the information stored on the machine readable label (34) is geometrical information of the storage frame (30) including at least the vertical height of the at least one tray (32)."

XI. Claim 1 of auxiliary request 1 differs from claim 1 of the main request in that the second paragraph, beginning with "- providing a movable storage frame ...", reads as follows:

"- providing a movable storage frame (30) comprising inside the storage frame (30) tray rails (32) in form of horizontally aligned bars for temporary positioning rod-like elements (R) thereon,"

and in that the last section of claim 1, beginning with "and wherein the information stored on the machine readable label (34) ...", reads as follows:

"wherein the information stored on the machine readable label (34) is geometrical information of the storage frame (30) including at least the vertical height of the tray rails (32) of at least one tray (32)".

XII. Claim 1 of auxiliary request 2 differs from claim 1 of auxiliary request 1 in that the wording

"characterized by providing the storage frame (30) with an at least machine readable label (34)"

has been replaced by:

"characterized by attaching at an outside surface of the storage frame (30) an at least machine readable

label (34)".

Claim 1 of each of auxiliary requests 3 to 6 is identical to claim 1 of auxiliary request 2.

Reasons for the Decision

1. Auxiliary request 2 - claim 1 - inventive step

1.1 As noted above, the subject-matter of claim 1 of auxiliary request 2 differs from the subject-matter of claim 1 of auxiliary request 1 in that the at least machine readable label is attached to an outside surface of the storage frame. Further, the subject-matter of claim 1 of auxiliary request 1 differs from the subject-matter of claim 1 of the main request in that the storage frame comprises, instead of at least one tray, tray rails inside the storage frame in the form of horizontally aligned bars for temporary positioning, instead of storing, the rod-like elements. Further, the vertical height included in the geometrical information accordingly refers to the tray rails.

The terms "positioning" and "storing" are considered in this context as equivalent. Further, in the present context, tray rails in the form of horizontally aligned bars are considered as relating to a specific embodiment of a tray, in accordance with the description of the patent which refers to "rails of a tray", "tray rails" or "shelf rails", on which the rod-like elements are to be positioned (see, for example, paragraphs [0009], [0019], [0056] and [0060], and FIG. 1).

Hence, the subject-matter of claim 1 of auxiliary

request 2 is more limited than that of claim 1 of both the main request and auxiliary request 1.

1.2 More specifically, claim 1 of auxiliary request 2 is directed to a method of controlling a robotic device for inserting or removing rod-like elements into or from a movable storage frame. The rod-like elements serve to store sausage-like products. The storage frame comprises tray rails inside the storage frame, on which the rod-like elements are to be positioned. At an outside surface of the storage frame an at least machine readable label is attached which includes geometrical information including the vertical height of the tray rails of at least one tray. Further, the information is read out and sent to a controller of the robotic device for controlling the movement of the robotic device.

1.3 The closest prior art is considered to be represented by document D1 which discloses a method of inserting or removing smoke-bars on which products are hung up, in particular sausages, into or from a movable storage frame (see the abstract, paragraph [0025] ("Rauchwagen 17"), and the last sentence of paragraph [0049] ("Es eignet sich auch zur Entnahme von Rauchstöcken aus Rauch- / Trockenwagen ... und zur Ablage von Rauchstöcken in Rauch- / Trockenwagen ...")). The movable storage frame comprises multiple trays in the form of horizontally aligned bars for positioning the smoke-bars ("Auflageflächen 18", column 6, lines 24 to 30, and FIG. 6). The sausages are stored on the smoke-bars in the form of loops ("Wurstschleifen", column 2, lines 35 to 42, column 3, lines 1 to 5, and FIG. 6). The method also uses a robotic device ("Roboterarm", column 6, lines 40 to 43).

1.4 D1, using the language of claim 1, thus discloses a method of controlling a robotic device for inserting or removing rod-like elements, like smoking bars, into or from a storage frame, the rod-like elements serving for storing sausage-like products, like sausages, each of which has a sausage-shaped body and a loop on one end of the body for a pendulously storage of the products, comprising the steps of:

- providing a movable storage frame comprising, inside the storage frame, tray rails in the form of horizontally aligned bars for temporary positioning rod-like elements thereon,

- moving the storage frame into the operating range of the robotic device,

- picking up by the robotic device a rod-like element on which at least one sausage-like product is hung up, and

- inserting or removing the rod-like element into or from the storage frame by the robotic device.

Hence, D1 discloses a method including all features of the preamble of claim 1.

1.5 The subject-matter of claim 1 thus differs from the method disclosed in D1 by the features of its characterising portion, namely in that the claimed method further comprises the following steps:

- attaching at an outside surface of the storage frame an at least machine readable label including information as to the storage frame;

- reading out information from the machine readable label at least before the storage frame is moved into the operating range of the robotic device; and

- sending said information to a control unit of the robotic device for controlling the movement of the robotic device while inserting or removing rod-like elements into or from the storage frame,

wherein the information stored on the machine readable label is geometrical information of the storage frame including at least the vertical height of the tray rails of at least one tray.

1.6 In its letter dated 2 July 2018, the proprietor formulated the technical problem starting out from D1 as improving the known method such that an automatic loading of storage frames with tray rails for receiving the smoke-bars is achieved for tray rails having different vertical heights. Leaving aside the question whether or not this technical problem is actually solved by the method of claim 1, the board will for the sake of argument adopt this as the technical problem underlying the subject-matter of claim 1.

1.7 Document D8 relates to a method of loading material onto racks, in particular in the field of food processing (page 1, lines 13 to 16). In its background section, D8 addresses the problem that the sizes and types of racks used in a facility may vary and provides for an automated rack loader as a solution to this problem (page 3, lines 9 to 13). The skilled person, starting out from D1 and faced with the above-mentioned technical problem, would therefore consider D8. Although in the illustrated embodiment the items are longitudinal sausages (page 7, lines 9 to 12, and FIG. 5), the method of D8 can be used for any items that are loaded onto a rack (see page 1, lines 13 to 16). Further, the racks are movable and each rack comprises a plurality of trays inside the rack, on

which the items to be loaded are to be positioned (page 3, line 21, to page 4, line 5, page 6, lines 9 to 11, FIG. 1). A programmable loader is for use with racks of varying heights and widths and any configuration (page 7, lines 10 to 14).

D8 further discloses that each rack is provided with a bar code or an RFID chip holding identifying data which contain the rack's size and configuration (page 7, line 25 to page 8, line 4). This data is read by a reader at the rack loader and is sent to a controller which adjusts the operation of the rack loader accordingly ("controller 520", *ibid.*). The board notes that in order to load the items on one of vertically stacked trays, the controller requires the information about the height of the respective tray and, hence, it is implicit that the identifying data includes information as to the vertical height of the tray.

D8, using the language of claim 1, thus discloses:

- attaching at the storage frame an at least machine readable label including information as to the storage frame;
- reading out information from the machine readable label; and
- sending said information to a control unit of the robotic device for controlling the movement of the robotic device while inserting rod-like elements into the storage frame,

wherein the information stored on the machine readable label is geometrical information of the

storage frame including at least the vertical height of at least one tray.

Since in D1 smoke-bars are positioned on tray rails of the storage frame, the skilled person would, on applying the teaching of D8 to the method of D1, accordingly include information about the vertical height of the tray rails. Further, attaching the at least machine readable label at an outside surface of the storage frame does not contribute to an inventive step, since, e.g., in the case of a bar code which needs to be read optically it would be almost mandatory, and in the case of an RFID chip it would obviously reduce undesirable electromagnetic shielding effects caused by the storage frame. The board further notes that the operating range of the robotic device is inherently mechanically limited. Since, on the other hand, the range of an RFID reader can easily be made longer than the operating range of the robotic device, it would be obvious to implement the method such that the information in the machine readable label is read before the storage frame enters the operating range of the robotic device, for example in order to avoid a situation in which the loading process can not be started due to the information included in the machine readable label not having been read out yet.

The skilled person, starting out from D1 and faced with the above-mentioned technical problem, would therefore, on applying the teaching of D8 to the method of D1 and using his common general knowledge, attach the machine readable label at an outside surface of the storage frame, carry out a read out of the information stored thereon at least before the storage frame is moved into the operating range of the robotic device, and include the vertical height of the tray rails in this

information. He would thus arrive without exercising inventive skill at a method which includes all the features of claim 1.

1.8 Arguments of the appellant-proprietor

The proprietor argued that the skilled person would not consider document D8, since D1 already provided a solution to the problem of storage frames of varying sizes, namely by providing a further sensor to detect when the smoke-bar abuts against a stop. The skilled person would thus continue in this direction and provide sensors to determine the height of the tray rails. The board notes that a hint in a document pointing to a possible solution does not prevent the skilled person from looking at alternative solutions in a different direction. Further, sensors for detecting the height of tray rails may be more costly than readers for machine readable labels and may not be necessary, since the different storage frames used in a facility are known and the height of their tray rails can thus be determined and stored in the machine readable label in advance, without any need to detect the height every time the storage frame is loaded.

The proprietor further argued that D8 did not disclose the feature that the geometrical information stored in the machine readable label included the vertical height of the tray rails and noted that the height mentioned in D8, page 7, lines 10 to 12, was the height of a rack and not of a tray in the rack. The board, however, notes that in the system of D8 the tray and the loader with its unloading side are aligned before the item is unloaded onto a tray (page 3, line 18, to page 4, line 5, and FIG. 1). For unloading an item, the vertical height of the tray upon which the item is to be

positioned is clearly crucial. In the system of D8, the information stored in, for example, the RFID chip thus has to include the vertical height of the tray.

The proprietor added that the system of D8 used an indexer which could only handle whole numbers and therefore could only load racks with regularly spaced trays. This was supported by the fact that the loader could load multiple items simultaneously onto adjacent trays (page 11, lines 16 and 17, and page 12, lines 13 to 17). Hence, the system of D8 could not be used with racks with trays at different heights. The board is not convinced by this argument since, even if multiple items could only be loaded onto adjacent trays with a predefined space between them, at least the height of one of the trays needs to be known in order to align the unloading side of the loader with the adjacent tray.

The proprietor further argued that the feature of reading out the information from the machine readable label at least before the storage frame was moved into the operating range of the robotic device had a technical effect, namely that the data read out was used to check the compatibility between the storage frame and the size of the sausages hanging on the rod-like element to be inserted into the storage frame (see, for example, paragraph [0061] of the patent specification). By reading the data at least before the storage frame was moved into the operating range of the robotic device it was assured that, in case there was no compatibility, the robotic device would not become active. The board notes, however, that a compatibility check is not part of the method of claim 1. It is thus merely optional. A timely reading out of the stored

information may also be done for other obvious reasons (see above, point 1.7, penultimate paragraph).

1.9 In view of the above, the board concludes that the subject-matter of claim 1 does not involve an inventive step (Articles 52(1) and 56 EPC). Auxiliary request 2 is therefore not allowable.

2. Main request and auxiliary requests 1 and 3 to 6

2.1 The subject-matter of claim 1 of the main request and of auxiliary request 1 being more general than that of claim 1 of auxiliary request 2 (see point 1.1 above) and claim 1 of each of auxiliary requests 3 to 6 being identical to claim 1 of auxiliary request 2, the considerations regarding lack of inventive step of the subject-matter of claim 1 of auxiliary request 2 apply mutatis mutandis to the subject-matter of claim 1 of each of the main request and auxiliary requests 1 and 3 to 6.

2.2 The board therefore concludes that the subject-matter of claim 1 of each of these requests does not involve an inventive step (Articles 52(1) and 56 EPC). The main request and auxiliary requests 1 and 3 to 6 are therefore not allowable.

3. There being no allowable request, it follows that the patent is to be revoked.

Order

For these reasons it is decided that:

4. The decision under appeal is set aside.

5. The patent is revoked.

The Registrar:

The Chairman:



G. Rauh

F. van der Voort

Decision electronically authenticated