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**Datasheet for the decision
of 18 December 2019**

Case Number: T 2119/16 - 3.4.02

Application Number: 06706101.0

Publication Number: 1859237

IPC: G01G13/24, G01G13/02, B65G33/32

Language of the proceedings: EN

Title of invention:
WEIGHING ARRANGEMENT

Patent Proprietor:
CABINPLANT INTERNATIONAL A/S

Opponent:
ISHIDA CO., Ltd.

Relevant legal provisions:
EPC 1973 Art. 56
RPBA Art. 13(1)

Keyword:
Inventive step (main request: no)
Admission of amended requests filed during appeal proceedings
(auxiliary requests: no)



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Case Number: T 2119/16 - 3.4.02

D E C I S I O N
of Technical Board of Appeal 3.4.02
of 18 December 2019

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Decision under appeal: **Interlocutory decision of the Opposition**
Division of the European Patent Office posted on
15 July 2016 concerning maintenance of the
European Patent No. 1859237 in amended form.

Composition of the Board:

Chairman R. Bekkering
Members: F. J. Narganes-Quijano
B. Müller

Summary of Facts and Submissions

I. The appellant (patent proprietor) lodged an appeal against the interlocutory decision of the opposition division finding the European patent No. 1859237 as amended according to the second auxiliary request then on file to meet the requirements of the EPC.

The opposition filed by the respondent (opponent) against the patent as a whole was based on the grounds for opposition of added subject-matter (Article 100(c) EPC), insufficiency of disclosure (Article 100(b) EPC) and lack of novelty and of inventive step (Article 100(a) together with Articles 54(1) and 56 EPC).

II. In its decision the opposition division held in respect of the requests then on file *inter alia* that

- the subject-matter of claim 1 of the patent as granted (main request) was new, but it did not involve an inventive step (Article 56 EPC) in view of documents

D16: US 5 340 949 A

D23: US 5 350 089 A,

- the subject-matter of claim 1 of the first auxiliary request did not involve an inventive step (Article 56 EPC), and

- the patent amended according to the second auxiliary request met the requirements of the EPC.

III. With the statement setting out the grounds of appeal the appellant maintained the main and the first auxiliary request underlying the decision under appeal. Subsequently, in reply to a communication of the board annexed to the summons to oral proceedings, with a

letter dated 18 November 2019, the appellant submitted claims 1 to 13 according to auxiliary request 2.

IV. Oral proceedings were held on 18 December 2019 before the board.

During the oral proceedings the appellant submitted claims 1 to 13 according to auxiliary request 1 and claims 1 to 8 according to auxiliary request 3.

The appellant requested that the decision under appeal be set aside and that the patent be maintained as granted (main request) or in amended form based on

- claims 1 to 13 according to auxiliary request 1 filed during the oral proceedings of 18 December 2019 or

- claims 1 to 13 according to auxiliary request 2 filed with the letter of 18 November 2019 or

- claims 1 to 8 according to auxiliary request 3 filed during the oral proceedings of 18 December 2019.

The respondent requested that the appeal be dismissed.

At the end of the oral proceedings the chairman announced the decision of the board.

V. Claim 1 of the main request consists of claim 1 as granted and reads as follows:

"Weighing arrangement for weighing sticky and/or flexible product material, such as fresh meat, marinated meat, poultry, fish and corresponding lumpy and/or sticky materials, comprising

- an infeed (1) for product material to be weighed,

- at least one dosing mechanism (3) for controlled conveying of product material portions from said infeed (1) to a weighing system,

- said dosing mechanism (3) comprising a motor-driven (7) transport screw (5) formed as a helically shaped rod positioned in an open trough (4), for conveying the product material from the infeed (1) to the weighing system and a control unit for controlling the motor in order to deliver a desired portion of product material to the weighing system, **characterized in that** the connection between the transport screw (5) and a core (6), if present, and the motor comprises a clip-on mechanism for easy assembly, disassembly, cleaning and exchange of transport screw (5) and/or core (6)."

Claim 1 of auxiliary request 1 differs from claim 1 of the main request in that the characterising portion reads as follows:

"the connection between the transport screw (5) and a core (6), if present, positioned inside the transport screw (5), said core (6) having a diameter which is less than the inner diameter of the transport screw (5), and the motor comprises a clip-on mechanism for easy assembly, disassembly, cleaning and exchange of transport screw (5) and/or core (6), wherein said infeed (1) comprises a conically formed central bottom part (2) leading the product material radially outwards to several dosing mechanisms (3) positioned in a circular pattern around the conical bottom (2)."

Claim 1 of auxiliary request 2 differs from claim 1 of the main request in that the characterising portion further reads as follows:

", said infeed (1) comprises a conically formed central bottom part (2) leading the product material radially outwards to several dosing mechanisms (3) positioned in a circular pattern around the conical bottom (2), and wherein the motors (7) for driving the transport screws are positioned under the conical bottom part (2) of the infeed (1)."

Claim 1 of auxiliary request 3 differs from claim 1 of the main request in that the expressions of the characterising portion "and a core (6), if present," and "and/or core (6)" have been deleted.

Reasons for the Decision

1. The appeal is admissible.
2. *Main request - Inventive step*
 - 2.1 In its decision the opposition division held that document D16 constituted the closest state of the art, that this document disclosed a weighing arrangement comprising all the features of the preamble of claim 1 as granted (Fig. 24, 26 and 27, together with column 4, lines 21 to 25; column 22, lines 17 to 29; column 23, lines 16 to 23 and lines 52 to 60; and column 25, lines 34 to 38), and that the claimed weighing arrangement differed from the weighing arrangement of document D16 only in the features of the characterizing portion of claim 1.

2.1.1 During the appeal proceedings the appellant has submitted that the transport screw of the weighing arrangement disclosed in document D16 was constituted by an Archimedean screw, but that the subject-matter of claim 1 excluded the provision of the claimed transport screw formed as a helically shaped rod as an Archimedean screw, and that for this reason the claimed transport screw constituted an additional distinguishing feature of the claimed weighing arrangement over the disclosure of document D16.

However, as noted by the opposition division in its decision and as also submitted by the respondent, the claimed subject-matter does not exclude that the transport screw formed as a helically shaped rod is provided in the form of an Archimedean screw. In particular, the weighing arrangement defined in claim 1 comprises embodiments involving a helically shaped rod positioned around a core having, as specified in one of the variants defined in dependent claim 3 as granted, a diameter equal to the inner diameter of the helically shaped rod, and in which the transport screw and the core are, as specified in dependent claim 5 as granted, synchronously rotated. It follows that in these embodiments encompassed by the claimed subject-matter the assembly constituted by the claimed helically shaped rod and the core constitutes a screw of the Archimedean type. It is also noted in this respect that the flight or helically shaped thread of an Archimedean screw constitutes a helically shaped rod as claimed, irrespective of whether the helically shaped rod and the core of the Archimedean screw are integrally formed of one single piece or formed of two different pieces.

With the statement of grounds of appeal the appellant submitted further arguments in this respect, based on

statements in different passages of the description of the patent specification and on different technical considerations relating to transport screws disclosed in other documents of the prior art on file, but the corresponding arguments are not supported by any of the features actually claimed.

It is noted that the above considerations were already presented by the board in the communication annexed to the summons to oral proceedings.

During the oral proceedings the appellant explicitly declined to make further submissions in this respect.

- 2.1.2 The board concludes that the claimed subject-matter does not exclude the provision of the claimed helically shaped rod and of the claimed core as constituting the thread and the core of the transport screw of the weighing arrangement disclosed in document D16, and that, as found by the opposition division in its decision, the claimed arrangement differs from the arrangement disclosed in document D16 only in the features of the characterizing portion.
- 2.2 In its decision the opposition division held that the objective problem solved by the features of the characterizing portion of claim 1 was "to provide for a connection of a transport screw to a motor that allows for an easy assembly, disassembly, cleaning and exchange of the transport screw", and that the claimed solution was obvious in view of the teaching of document D23.
 - 2.2.1 The board first notes that, while the problem of cleaning the arrangements under consideration is generally known and is already addressed in document

D16 (see for instance column 2, third paragraph), the idea of disassembling and reassembling the transport screw connected to the motor is not disclosed in document D16 and, in addition, constitutes an element of the claimed solution. For this reason, the board considers that the objective problem formulated by the opposition division contains pointers ("assembly, disassembly [...] and exchange of the transport screw") to the claimed solution and that the objective problem solved by the claimed arrangement over the arrangement disclosed in document D16 is rather to be formulated in terms of providing an arrangement that would simplify the operation of cleaning the transport screw.

- 2.2.2 Document D23 discloses a feeder for dispensing flowable substances comprising a feed screw connected to a drive system (title and Fig. 1), the feed screw being - as acknowledged by the appellant - of the Archimedean type (Fig. 1). In addition, the document discloses the use of the feed in extremely high sanitary conditions (column 1, lines 47 to 49) and the need for an arrangement for easy insertion and removal of the feed screw for the purposes of cleaning or exchanging the feed screw (column 1, lines 28 to 34), discusses the shortcomings of connection mechanisms for disassembling and reassembling the feed screw known in the art and constituted by a threaded connection and a bayonet arrangement (column 1, line 54 to column 2, line 34), and proposes the use of a connection mechanism of the clip-on type (Fig. 2A and 2B together with column 4, lines 35 to 39, and column 5, lines 3 to 9) that simplifies the operation of disassembling and reassembling the feed screw for the purposes of cleaning or exchanging it.

The skilled person confronted with the objective problem formulated above would, as submitted by the respondent, consider the provision of the connection between the transport screw and the motor of the arrangement of document D16 in the form of the clip-on mechanism disclosed in document D23, this mechanism allowing for an easy assembly, disassembly, cleaning and exchange of the transport screw. Therefore, as concluded by the opposition division in its decision, the skilled person would arrive in an obvious way at the claimed weighing arrangement.

- 2.2.3 During the appeal proceedings the appellant submitted that document D16 only discussed the cleaning of the pool and the metering hoppers (column 11, lines 54 to 58), and that there was no hint in the document towards cleaning the transport screw, let alone towards removing the transport screw for the purpose of cleaning it.

This argument, however, is not found convincing. As already noted in point 2.2.1 above, the problem of cleaning the arrangements under consideration is generally known. In addition, document D16 addresses the problem of cleaning the arrangement, and more specifically the pool and the metering hoppers of the arrangement (column 4, lines 21 to 25, and column 11, lines 54 to 58), in a context requiring specific sanitary conditions (see for instance paragraph bridging columns 1 and 2), and in this context the need for cleaning the transportation screw of the arrangement would - as submitted by the respondent - straightforwardly emerge when operating the arrangement with sticky materials such as foodstuff (D16, column 1, lines 8 to 13, and column 25, lines 33 to 38). In addition, as already noted in point 2.2.2 above,

document D23 teaches cleaning the transport screw by first removing it, and then reassembling the transport screw after cleaning.

The appellant has also submitted that the arrangement disclosed in document D23 was for use with granular objects such as powders, pellets, granules, etc. (column 1, lines 14 to 17) and not with soft, sticky materials; in addition, the arrangement of document D23 was able to impart high torques onto the flowable material in order to overcome a jammed condition (column 1, lines 23 to 27), and this jammed condition would never occur when conveying delicate products which would be seriously damaged or destroyed when exposed to such high torques.

This argument does not convince the board either because the fact that the arrangement of document D23 is designed to impart a torque onto flowable materials sufficient to overcome a jammed condition does not render the disclosure of the document relating to the clip-on mechanism incompatible with low torque applications or with the weighing arrangement of document D16. Furthermore, the claimed subject-matter is not restricted to conveying delicate products, and, as submitted by the respondent, in specific contexts the mentioned torque capability would even constitute an advantage of the clip-on mechanism disclosed in document D23. In addition, document D16 is directed to weighing sticky materials such as foodstuffs (column 25, lines 34 to 38), i.e. materials that are sticky and flexible as required by claim 1, and the fact that document D23 is directed to dispensing flowable substances (title) such as powders, pellets, granules and flakes (column 1, lines 14 to 17) would not have dissuaded the skilled person from applying the teaching

of document D23 to document D16, among other reasons because document D23 - as submitted by the respondent - also refers to fibres, which are generally flexible, as an example of flowable substances (column 1, lines 14 to 17).

The further argument submitted by the appellant according to which there existed multiple options to solve the objective problem and the skilled person could have considered the claimed solution, but would have considered it only with the benefit of hindsight, is not persuasive either. In the board's opinion the mere fact that, in addition to the clip-on mechanism disclosed in document D23, this same document and the remaining documents of the prior art disclose other alternative mechanisms for cleaning the transport screw by disassembling and reassembling the transport screw does not support the appellant's argument that the skilled person could have but, without the benefit of hindsight, would not have considered the application of the teaching of document D23 relating to the clip-on mechanism to the disclosure of document D16.

2.3 In view of the above considerations, the board concludes that, as held by the opposition division in the decision under appeal, the subject-matter of claim 1 as granted does not involve an inventive step in view of documents D16 and D23 (Article 56 EPC 1973).

3. *Auxiliary requests 1 to 3 - Article 13(1) RPBA*

3.1 Auxiliary request 1

The amended claims of auxiliary request 1 were submitted by the appellant during the oral proceedings before the board. The amended claim 1 is based on a

combination of claim 1 as granted with the features of one of the two variants defined in dependent claim 3 as granted, together with the features of dependent claim 11 as granted. The appellant submitted that the amendments excluded construing the transport screw and the core of the claimed arrangement as constituting a screw of the Archimedean type, and that the amendments were admissible because the resulting amended claims were *prima facie* allowable in view of the prior art.

The respondent submitted that there was no justification for the late filing of the amendments, that the amended claims would require a reassessment of the case on a new basis, and requested postponement of the oral proceedings should the request be admitted.

The board notes that the amendments introduced into the claims of auxiliary request 1 were directed to overcome the reasons why the subject-matter of claim 1 as granted was not considered to involve an inventive step (cf. point 2 above). However, the issue of the construction of the transport screw and the core of the claimed arrangement as constituting a screw of the Archimedean type as well as the issue of inventive step of the subject-matter of claim 1 as granted over documents D16 and D23 were already extensively discussed during the first-instance proceedings and also addressed in detail by the opposition division in its decision. Furthermore, neither the board's communication annexed to the summons to oral proceedings nor the discussion of claim 1 as granted during the oral proceedings before the board was based on new facts or on a change of the assessment of the case on appeal that would have justified the filing of the amended claims of auxiliary request 1 in response during the oral proceedings. In addition, contrary to

the appellant's submissions, it cannot be simply assumed that the amended claims were *prima facie* allowable because, as submitted by the respondent, the admission of the amended claims would have required a reassessment of the whole case on a new basis, i.e. on an arrangement excluding a transport screw of the Archimedean type. This reassessment would, in addition, have involved a complex reconsideration of the technical pertinence of the numerous documents of the prior art considered during the proceedings.

In view of these considerations, and in particular of the late filing, without appropriate justification, of the amended claims and of the fact that the amended claims, if admitted, would have raised questions which the board deemed to be inappropriately complex at that stage of the proceedings, the board, in the exercise of its discretion under Article 13(1) RPBA, considered appropriate not to admit the claims of auxiliary request 1 into the proceedings.

3.2 Auxiliary request 2

The amended claims of auxiliary request 2 were submitted with the letter dated 18 November 2019 in reply to the communication annexed to the summons to oral proceedings. The amended claim 1 was based on a combination of claim 1 as granted with the features of dependent claims 11 and 12 as granted.

The appellant submitted that the amendments were in response to the comments of the board in the communication annexed to the summons to oral proceedings, that the amendments were only based on the features of granted dependent claims, and that the resulting amended claims were *prima facie* allowable.

The respondent contested the admissibility of this request, among other reasons because of its late filing, because the appellant could have presented the amendments already during the first-instance proceedings or with the statement of grounds of appeal and the board's communication contained no new issue that would have justified amending the claims at that stage of the proceedings, and because the amendments raised new issues. The respondent also requested postponement of the oral proceedings if the request was admitted.

Unlike the claims of auxiliary request 1 which were filed during the oral proceedings before the board, the claims of auxiliary request 2 were filed before the oral proceedings in reply to the board's communication annexed to the summons. However, in the mentioned communication the board expressed its preliminary opinion that, as already found by the opposition division in its decision, the subject-matter of claim 1 as granted did not appear to involve an inventive step over documents D16 and D23, and in the corresponding assessment presented by the board no new issue was introduced that would have justified the filing in response of the amended claims of auxiliary request 2. In addition, as submitted by the respondent, the amended claims raised new issues and, if admitted, would have raised questions which the board deemed to be inappropriately complex at that stage of the proceedings, in particular in view of the numerous documents of the prior art cited during the proceedings.

In view of these considerations, the board, in the exercise of its discretion under Article 13(1) RPBA,

considered appropriate not to admit the claims of auxiliary request 2 into the proceedings for analogous reasons to those given in point 3.1 above in respect of auxiliary request 1.

3.3 Auxiliary request 3

The amended claims of auxiliary request 1 were submitted by the appellant during the oral proceedings before the board. The amended claim 1 consists of claim 1 as granted after deletion of the variant relating to the presence of the core.

The appellant submitted that the deletion of the features relating to the core excluded construing the transport screw of the claimed arrangement as constituting a screw of the Archimedean type and that the amendment overcame the objection of lack of inventive step over documents D16 and D23.

The respondent submitted that, as in the case of auxiliary request 1, the amendments were presented too late, that the amended claim required examination as regards clarity and also a new search, and that it was not in a position to present its full case on the allowability of the amended claims.

The board notes that the issue of novelty and inventive step of claim 1 as granted, during the whole proceedings, was focused on the variant of claim 1 relating to the presence of the core, and that the deletion in claim 1 as granted of the features of the core constituted a substantial change of the appellant's case which, at that stage of the proceedings, would have required an inappropriately complex reconsideration of the claimed subject-matter

and of the documents of the prior art in a new light. In addition, as in the case of the amended claims of auxiliary request 1 (see point 3.1 above, third paragraph), there is no reason in the circumstances of the case that would have justified making the mentioned amendment only during the oral proceedings before the board.

In view of these considerations, the board, in the exercise of its discretion under Article 13(1) RPBA, considered appropriate not to admit the claims of auxiliary request 3 into the proceedings for analogous reasons to those given in point 3.1 above in respect of auxiliary request 1.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



S. Sánchez Chiquero

R. Bekkering

Decision electronically authenticated