

**Internal distribution code:**

- (A) [ - ] Publication in OJ
- (B) [ - ] To Chairmen and Members
- (C) [ - ] To Chairmen
- (D) [ X ] No distribution

**Datasheet for the decision  
of 8 July 2019**

**Case Number:** T 1745/15 - 3.2.07

**Application Number:** 07004190.0

**Publication Number:** 1782929

**IPC:** B26D5/00, B26D7/00

**Language of the proceedings:** EN

**Title of invention:**

Automated product profiling apparatus

**Patent Proprietor:**

Formax, Inc.

**Opponent:**

MAREL A/S

**Headword:**

**Relevant legal provisions:**

EPC Art. 114(1), 100(b), 100(c), 76(1), 52(1), 54(3), 54(2),  
56

RPBA Art. 12(4)

**Keyword:**

Ground for opposition - insufficient disclosure (late filed)  
Divisional application - subject-matter extends beyond content  
of earlier application (no, after amendment)  
Novelty - (yes)  
Inventive step - (yes)

**Decisions cited:**

G 0009/91, G 0010/91, G 0002/10

**Catchword:**



**Beschwerdekammern**  
**Boards of Appeal**  
**Chambres de recours**

Boards of Appeal of the  
European Patent Office  
Richard-Reitzner-Allee 8  
85540 Haar  
GERMANY  
Tel. +49 (0)89 2399-0  
Fax +49 (0)89 2399-4465

Case Number: T 1745/15 - 3.2.07

**D E C I S I O N**  
**of Technical Board of Appeal 3.2.07**  
**of 8 July 2019**

**Appellant:** Formax, Inc.  
(Patent Proprietor) 9150 191st Street  
Mokena, Illinois 60448 (US)

**Representative:** Beier, Ralph  
V. Bezold & Partner  
Patentanwälte - PartG mbB  
Akademiestraße 7  
80799 München (DE)

**Appellant:** MAREL A/S  
(Opponent) P.O. Pedersens Vej 18  
Skejby  
8200 Århus N (DK)

**Representative:** Inspicos P/S  
Kogle Allé 2  
2970 Hørsholm (DK)

**Decision under appeal:** **Interlocutory decision of the Opposition  
Division of the European Patent Office posted on  
8 June 2015 concerning maintenance of the  
European Patent No. 1782929 in amended form.**

**Composition of the Board:**

**Chairman** I. Beckedorf  
**Members:** A. Beckman  
K. Poalas

## **Summary of Facts and Submissions**

- I. The patent proprietor and the opponent both filed appeals in due time and form against the decision of the opposition division maintaining the European patent No. 1 782 929 in amended form.
- II. Opposition had been filed against the patent as a whole based on Article 100(c) EPC (unallowable amendments) and Article 100(a) EPC (lack of novelty and lack of inventive step).

The opposition division held

- that the ground for opposition according to Article 100(c) EPC prejudiced the maintenance of the patent as granted, since the subject-matter of claim 1 as granted extended beyond the content of the earlier application as filed and, thus, did not meet the requirements of Article 76(1) EPC,
- that the subject-matter of claim 1 of the auxiliary requests A and A1 did not meet the requirements of Article 76(1) EPC.

The patent was then maintained in amended form on the basis of the auxiliary request A2.

- III. The following documents of the opposition proceedings are referred to in the present decision:

D1: EP 1 046 478 A1,  
D2: EP 1 044 770 A1,  
D3: EP 196 04 254 A1,  
D5: US 4 557 019 A,  
D13: JP 7 184 534 A,  
D13a: German translation of D13,  
D15: GB 2 264 602 A.

- IV. The Board issued a communication pursuant to Article 15(1) RPBA dated 10 April 2019 with its preliminary opinion, according to which it appeared that both the appellant-patent proprietors' appeal and the appellant-opponent's appeal would be dismissed because
- the ground for opposition pursuant to Article 100(c) EPC seemed to prejudice the maintenance of the patent as granted,
  - the ground for opposition pursuant to Article 100(b) EPC, filed by the appellant-opponent after the expiry of the period for giving notice for opposition and not admitted into the opposition proceedings by the opposition division, was not to be taken into account in the appeal proceedings;
  - the subject-matter of claim 1 of the auxiliary requests A and A1, respectively, seemed not to meet the requirements of Article 76(1) EPC, and
  - the claimed subject-matter according to the auxiliary request A2 seemed to meet the requirements of the EPC.

In response to said communication, the patent proprietor filed with letter dated 24 June 2019 additional arguments concerning, *inter alia*, the admissibility of amendments in claim 1 of the main request.

- V. Oral proceedings before the Board took place on 8 July 2019 during which the factual and legal situation was discussed with the parties.

For the course of the oral proceedings, reference is made to the minutes thereof.

The decision was given at the end of the oral proceedings.

VI. The appellant-patent proprietor requested

that the decision under appeal be set aside and  
that the patent be maintained as granted (main request),  
or, in the alternative, when setting aside the decision under appeal,  
that the patent be maintained in amended form on the basis of one of the fourteen auxiliary requests A, A1, A2, B, B1, B2, C, C1, C2, C3, A3, B3, C2.1 or C4 (in that order) filed during opposition proceedings, wherein auxiliary requests A, B and C were filed with letter dated 3 March 2014, auxiliary requests A1, A2, B1, B2, C1, C2 and C3 were filed with letter dated 16 February 2015, and auxiliary requests A3, B3, C2.1 and C4 were filed during oral proceedings on 17 March 2015 before the opposition division,  
of which the main request and auxiliary requests A, A1 and A2 were decided upon in the decision under appeal, wherein auxiliary request A2 was held by the opposition division to meet the requirements of the EPC.

The appellant-opponent requested

that the decision under appeal be set aside and  
that the European patent No. 1 782 929 be revoked.

VII. **Feature analysis of claim 1 of the main request**, i.e. according to the patent as granted (see impugned decision, under point 1. of the main request):

- 1.1 An apparatus (15) for acquiring a profile of a product (45) for use in subsequent processing of the product (45) comprising:
  - 1.2 one or more product drives (100, 115, 120) that are operable to drive the product (45);
  - 1.3 an upper vision system (170) disposed to acquire visual information relating to the profile of the upper portion of the product (45),
  - 1.4 wherein the upper vision system (170) comprises an upper camera (180) located above the product (45);
  - 1.5 a lower vision system (175) disposed to acquire visual information relating to the profile of the lower portion of the product (45),
  - 1.6 wherein the lower vision system (175) comprises a lower camera (90) located below the product (45);
  - 1.7 a control system (150) connected for control of the upper and lower vision systems (170, 175) and operating to convert the information received from the upper and lower vision systems (170, 175) into a format suitable for use by a subsequent product processor (20),characterized in that
  - 1.8 a scanning chamber (55) is provided for accepting the product (45),
  - 1.9 wherein the product (45) is driven through the scanning chamber (55) by the one or more product drives (100, 115, 120) and
  - 1.10 scanned within the scanning chamber (55), and
  - 1.11 the upper vision system (170) comprises two upper line lasers (75) disposed on opposite sides of the product (45),
  - 1.12 wherein the upper line laser project overlapping beams onto and across the product (45);and/or

1.13 the lower vision system (175) comprises two lower line lasers (85) disposed on opposite sides of the product (45),

1.14 wherein the lower line lasers project overlapping beams onto and across the product (45).

Since **claim 1 of auxiliary requests A and A1**, as acknowledged by the patent proprietor at the oral proceedings before the Board (see page 3 of the minutes of the oral proceedings of 8 July 2019), comprises a similar "or"-alternative feature present between features 1.12 and 1.13 of claim 1 of the main request, which is decisive for the Board's decision, there is no need to reproduce the full claim wording.

**Feature analysis of claim 1 of auxiliary request A2**

according to the feature analysis of claim 1 of the main request (in bold the features introduced and in strike-through the features deleted with respect to claim 1 of the main request, emphasis added by the Board):

"1.1 An apparatus (15) for acquiring a profile of a product (45) for use in subsequent processing of the product (45) comprising:

1.2 one or more product drives (100, 115, 120) that are operable to drive the product (45) **in a linear direction;**

1.3 an upper vision system (170) disposed to acquire visual information relating to the profile of the upper portion of the product (45),

1.4 wherein the upper vision system (170) comprises an upper camera (180) located above the product (45);

1.5 a lower vision system (175) disposed to acquire visual information relating to the profile of the lower portion of the product (45),



- 1.6 wherein the lower vision system (175) comprises a lower camera (90) located below the product (45);
- 1.7 a control system (150) connected for control of the upper and lower vision systems (170, 175) and operating to convert the information received from the upper and lower vision systems (170, 175) into a format suitable for use by a subsequent product processor (20), characterized in that
- 1.8 a scanning chamber (55) is provided for accepting the product (45),
- 1.9 wherein the product (45) is driven through the scanning chamber (55) by the one or more product drives (100, 115, 120) and
- 1.10 scanned within the scanning chamber (55), and
- 1.11 the upper vision system (170) comprises two upper line lasers (75) disposed on opposite sides of the product (45) **for illuminating the product (45) in a fixed plane transverse to the linear direction,**
- 1.12 wherein the upper line laser project overlapping beams onto and across the product (45), **and wherein the upper camera images the surface profile projected by the upper line lasers;**
- and/or
- 1.13 the lower vision system (175) comprises two lower line lasers (85) disposed on opposite sides of the product (45) **for illuminating the product (45) in a fixed plane transverse to the linear direction,**
- 1.14 wherein the lower line lasers project overlapping beams onto and across the product (45), **and wherein the lower camera images the surface profile projected by the lower line lasers.**

VIII. The opponent's arguments in the appeal proceedings, as far as they are relevant for the present decision, can be summarised as follows and are dealt with in more detail in the reasons for the decision:

The late-filed ground for opposition pursuant to Article 100(b) EPC is to be taken into account in the appeal proceedings, even in the absence of the patent proprietor's consent, since in opposition proceedings the patent proprietor shifted its statement of the objective technical problem for assessment of inventive step and hence the technical focus of the debate. This change of focus being crucial to the discussion of inventive step results in an insufficiency of disclosure issue which could not had been foreseen by the opponent. The opposition division in disregarding these circumstances erred in its discretionary decision not to admit said ground for opposition into the opposition proceedings. For the same reason, in case of considering it a fresh ground for opposition filed for the first time in the appeal proceedings, the Board is not barred from examining the patent in suit for compliance with Articles 100(b), 83 EPC, even in case the patent proprietor withholds its consent in this respect.

*Main request*

The "or"-alternative between the features 1.12 and 1.13 of claim 1 of the main request is not disclosed in the parent application as originally filed (Articles 100(c) and 76(1) EPC).

*Auxiliary requests A and A1*

The subject-matter of claim 1 of auxiliary requests A and A1 does not meet the requirements of Article 76(1) EPC, since the objection with regard to the "or"-alternative between the features 1.12 and 1.13 of claim 1 of the main request applies, *mutatis mutandis*, to the

subject-matter of claim 1 of auxiliary requests A and A1.

*Auxiliary request A2*

The subject-matter of claims 1 to 7 of auxiliary request A2 extends beyond the content of the parent application as originally filed (Article 76(1) EPC).

The subject-matter of claim 1 of auxiliary request A2 lacks novelty over the disclosure of D1, D2 and D3, respectively.

The subject-matter of claim 1 of auxiliary request A2 lacks inventive step in view of the teaching of D13/D13a chosen as the closest prior art in combination with the teaching of D15 and the common general technical knowledge of the person skilled in the art, as known for example from D5.

IX. The patent proprietor's arguments in the appeal proceedings, as far as they are relevant for the present decision, can be summarised as follows and are dealt with in more detail in the reasons for the decision:

The discretionary decision of the opposition division not to admit the late-filed ground for opposition pursuant to Article 100(b) EPC into the proceedings is based on the right principles in a reasonable way. In addition, the patent proprietor does not agree to an introduction of the new ground for opposition pursuant to Article 100(b) EPC into the appeal proceedings.

*Main request*

The ground for opposition according to Articles 100(c) and 76(1) EPC does not hold against the patent as granted. In particular, the "or"-alternative between the feature 1.12 and 1.13 in claim 1 as granted is disclosed in the parent application as originally filed.

*Auxiliary requests A and A1*

As the contested "or"-alternative in claim 1 of the main requests is comprised in claim 1 of auxiliary requests A and A1, the patent proprietor relies upon its argumentation with regard to the main request.

*Auxiliary request A2*

The subject-matter of claims 1 to 7 of auxiliary request A2 complies with the requirements of Article 76(1) EPC.

The subject-matter of claim 1 is novel over the disclosure of D1, D2 or D3, because

- D1 does not disclose a scanning chamber, overlapping beams and line lasers according to features 1.8 to 1.14 of claim 1,
- D2 does not disclose line lasers and overlapping beams according to features 1.11 to 1.14 of claim 1, and
- D3 does not disclose a scanning chamber, overlapping beams and that the lasers are arranged on opposite sides of the product according to features 1.8 to 1.14 of claim 1.

The skilled person starting from D13/D13a and seeking to improve the image information would not be led by the teaching of D15, D5 and the common general technical knowledge and practice of the person skilled in the art to the subject-matter of claim 1 in an obvious manner.

### **Reasons for the Decision**

1. *Admittance into the proceedings of the ground for opposition pursuant to Article 100(b) EPC*
- 1.1 The opponent contests the discretionary decision of the opposition division not to admit the late-filed ground for opposition under Article 100(b) EPC into the proceedings.
- 1.2 The Board concurs with the patent proprietor's view that the opposition division applied the right principles in a reasonable way in its discretionary decision not to admit the ground for opposition according to Article 100(b) EPC. The impugned decision elaborately deals with the admittance into the opposition proceedings of the new ground for opposition (see disputed decision, points 5. to 13.) taking into account the shifting of the focus of the inventive step debate on speckle reduction as emphasized by the opponent. Hence, the opposition division's discretionary decision is not based on incorrect technical assumptions or an erroneous approach.
- 1.3 As far as the opponent suggests that the Board nevertheless should take into account said late-filed ground for opposition even without the patent

proprietor's consent to the introduction of that ground for opposition, the Board disagrees for the following reasons.

Firstly, reference is made to the decision and opinion of the Enlarged Board of Appeal in cases G 9/91 and G 10/91 (OJ EPO 1993, 408, 420).

- G 9/91, Reasons point 10 with reference to T 9/87, OJ EPO 1989, 438: "The requirements of Rule 55(c) EPC 1973 [now Rule 76(2)(c) EPC] to specify the extent to which the patent is opposed within the time limit prescribed by Article 99(1) EPC would obviously be pointless if later on other parts of the patent than those so opposed could freely be drawn into the proceedings. This would also be contrary to the basic concept of post-grant opposition under the EPC as outlined above. By limiting the extent to which the patent is opposed to only certain subject-matters, the opponent deliberately refrains from making use of his right under the EPC to oppose remaining subject-matters covered by the patent. Such subject-matters are therefore, strictly speaking, not subject to any "opposition" in the sense of Articles 101 and 102 EPC, nor are there any "proceedings" in the sense of Articles 114 and 115 EPC in existence concerning such nonopposed subject-matters. Consequently, the EPO has no competence to deal with them at all."

- G 10/91, Order 2: "In principle, the Opposition Division shall examine only such grounds for opposition which have been properly submitted and substantiated in accordance with Article 99(1) in conjunction with Rule 55(c) EPC [now Rule 76(2)(c) EPC]. Exceptionally, the Opposition Division may in application of Article 114(1) EPC consider other grounds for

opposition which, prima facie, in whole or in part would seem to prejudice the maintenance of the European patent."

Secondly, as already mentioned under point 1.2 above, the Board cannot find fault in the exercise of discretion by the opposition division under Article 114(1) EPC not to admit the late-filed ground for opposition into the opposition proceedings. The Board itself, therefore, exercises its own discretion under Article 12(4) RPBA to hold inadmissible the ground for opposition pursuant to Article 100(b) EPC, filed in opposition proceedings after the expiry of period provided for in Article 99(1) EPC and not admitted by the opposition division.

Thirdly, even if said ground for opposition was to be qualified a fresh ground in appeal proceedings, as suggested by the opponent, the Board would be barred from examining it by virtue of the opinion of the Enlarged Board in case G 10/91 (*supra*, Order 3), according to which a fresh grounds for opposition may be considered in appeal proceedings only with the approval of the patentee; such an approval was not given by the patent proprietor in the case at hand (see patent proprietor's letter of reply dated 3 February 2015 (received on 3 February 2016), point B.).

- 1.4 The above was essentially the preliminary opinion of the Board provided to the parties in the communication pursuant to Article 15(1) RPBA dated 10 April 2019, point 7., having taken into consideration the corresponding submissions of the parties dated 19 October 2015 and 3 February 2015 (received on 3 February 2016).

At the oral proceedings before the Board, both parties relied upon their written submissions on the issue of admittance into the proceedings of the ground for opposition pursuant to Article 100(b) EPC (see first indent on page 4 of the minutes of the oral proceedings).

1.5 Under these circumstances, the Board - having once again taken into consideration all the relevant aspects concerning said issue - decides not to take into consideration the late-filed ground for opposition under Article 100(b) EPC.

2. *Main request (patent as granted) -  
Amendments, Articles 100(c) and 76(1) EPC*

2.1 The patent proprietor contests the finding of the impugned decision that the alternative "or" in claim 1 as granted is not originally disclosed in the parent application as filed.

According to a first line of argumentation, the patent proprietor puts forward that the reference to molded products on page 1, line 25, of the parent application as filed discloses the "or" option. Molded products always have a flat bottom surface which is defined by the bottom of the mold. The person skilled in the art knows that it makes no sense to scan the flat bottom surface of a molded product. Therefore, the reference to "molded products" prompts the person skilled in the art to scan the product surface on one side only, i.e. on the upper surface of the molded products, which typically has an irregular outer contour. In other words, the reference to "molded products" discloses the "or" alternative between the features 1.12 and 1.13.



Furthermore, the statement on page 17, lines 3 to 8, of the parent application as filed, proposes the use of opposed line lasers for scanning irregular surfaces. However, the person skilled in the art has already learnt from the afore-mentioned reference to molded products that the bottom surface of molded products is not irregular. Therefore, the person skilled in the art understands that it is sufficient to scan molded products on the upper side only. In other words, the afore-mentioned statements in the parent application as filed disclose the "or" alternative between the features 1.12 and 1.13.

According to a second line of argumentation, the patent proprietor underlines that the afore-mentioned statement on page 17, lines 3 to 8, of the parent application as filed, discloses the "or" alternative between the features 1.12 and 1.13, whereas the following statement on page 17, lines 11 to 13, of the parent application as filed, makes clear that the "and" option is only one case while the "or" option is another case. In other words, this statement discloses the "or" alternative.

According to a third line of argumentation, the patent proprietor points out that it is not indispensable for the function of the invention to have a dual line laser arrangement both in the upper vision system and in the lower vision system, which is also not specified as being essential in the disclosure of the invention. The essentiality test clearly shows that the wording of claim 1 as granted including the "or" alternative is admissible.

2.2 The Board is not convinced by the patent proprietor's lines of argumentation for the following reasons.

With regard to the patent proprietor's first line of argumentation, the Board notes that molded products are merely referred to in the description of the background of the invention of the parent application as filed and, thus, as not being part of the intended use of the invention. At no instance indicates the parent application as filed that molded products have a planar bottom surface which does not require scanning, let alone that one of the upper and lower vision systems could be dispensed in such use.

Furthermore, the Board cannot agree that molded products always have a flat bottom surface which is defined by the bottom of the mold, since, as argued by the opponent, the person skilled in the art knows that molded products exist which have upper and lower irregular shapes.

With regard to the patent proprietor's second line of argumentation, the Board considers that from the above-mentioned statements in the parent application as filed, cited by the patent proprietor, neither an explicit nor an implicit disclosure is derivable as to the provision of only an upper **or** only a lower vision system. As a matter of fact, contrary to the patent proprietor's view, the statement on page 17, lines 11 to 13, of the parent application as filed, supports indeed that merely the "and" alternative is originally disclosed.

The Board further notes that claims 7, 16 and 18 along with the description of the embodiments on page 8, second paragraph, and on page 9, second paragraph, of

the parent application as filed, always and consistently relate to the provision of line lasers above **and** beneath the product or to upper **and** lower vision systems. Contrary to the patent proprietor's view, page 7, first paragraph, does not specify any location of the line lasers and fails to disclose that the line lasers are illuminating downwardly.

The Board considers that the "or" option also covers technically plausible embodiments, which were not originally disclosed in the parent application as filed, as it is possible not to have any line lasers on one side of the product.

With regard to the patent proprietor's third line of argumentation, it is noted that according to established jurisprudence of the Boards of Appeal the allowability of amendments relating to the disclosure is assessed only following the standard laid down in G 2/10 (OJ 2012, 376) as the "gold standard". In this regard, the application of the "essentiality test" cannot replace a deficiency of disclosure appearing when applying the "gold standard".

2.3 As a consequence, the Boards considers that the ground for opposition pursuant to Article 100(c) EPC in combination with Article 76(1) EPC holds against the patent as granted.

### 3. *Auxiliary request A*

3.1 Since the subject-matter of claim 1 according to auxiliary request A comprises the contested "or"-alternative, as confirmed by the patent-proprietor at the oral proceedings (see page 3 of the minutes of the oral proceedings), the same reasons as the ones given

under point 2.2 above with regard to the main request apply, *mutatis mutandis*, to the subject-matter of claim 1 according to auxiliary request A.

3.2 As a consequence, the subject-matter of claim 1 according to auxiliary request A does not meet the requirements of Article 76(1) EPC.

4. *Auxiliary request A1*

4.1 Since the subject-matter of claim 1 according to auxiliary request A1 comprises the contested "or"-alternative, as confirmed by the patent-proprietor at the oral proceedings (see page 3 of the minutes of the oral proceedings), the same reasons as the ones given under point 2.2 above with regard to the main request apply, *mutatis mutandis*, to the subject-matter of claim 1 according to auxiliary request A1.

4.2 As a consequence, the subject-matter of claim 1 according to auxiliary request A1 does not meet the requirements of Article 76(1) EPC.

5. *Auxiliary request A2 - Amendments*

5.1 The opponent argues that the subject-matter of claims 1 to 7 according to auxiliary request A2 includes subject-matter which extends beyond the content of the parent application as originally filed.

5.2 *"reference markers" - claim 1*

The opponent contests the finding of the impugned decision that the features "wherein the upper vision system (170) comprises an upper camera (180) located above the product (45)" and "wherein the lower vision

system (175) comprises a lower camera (90) located below the product (45)" of claim 1 of auxiliary request A2 find support in the parent application as filed. In this context, the opponent explains that, contrary to the findings in the impugned decision (point 3.1.3), the recitation of an upper and lower camera according to these features without further recitation of reference markers in functional interrelation with the cameras and the control system results in an inadmissible intermediate generalisation.

The Board cannot share the opponent's view. Although reference markers are foreseen in independent claim 1 of the parent application as filed, none of the other independent claims 11, 21 and 26 mentions any reference markers. Contrary to the opponent's view, the Board cannot see from claim 1 or from page 14, lines 11-12, of the parent application as filed, any disclosure or suggestion in that reference markers are required or appear for the skilled person to be essential for the cameras' and control system's ability to detect the projected surface profil.

### 5.3 *Overlapping beams projected by line lasers - claim 1*

The opponent submits that the provision of overlapping beams projected by the line lasers according to claim 1 lacks adequate support in the parent application as filed and argues that the general recitation of overlapping beams in the context of the upper and lower line lasers constitutes an inadmissible intermediate generalisation.

The Board cannot share the opponent's view and considers that the disclosure of "a pair of generally opposed lasers applying overlapping beams" to cover the

surface of the product on page 17, lines 2-6, of the parent application as filed provides adequate support for the contested feature of claim 1, wherein the Board cannot see any indication that the contested feature is disclosed in any structural or functional relationship with other features.

5.4 *Fixed increments - claim 2*

As regards the dependent claims, the opponent argues that the acquisition of "multiple images ... at fixed increments along the length of the product" according to claim 2 of auxiliary request A2 is disclosed only in combination with other features in the description of the drawings (page 13, lines 6-11) and therefore lacks support in the parent application as filed. In particular, the provision of control pulses used as synchronisation signals which a central controller uses to trigger the acquisition of a profile reading appears to be essential for the ability to capture images at fixed increments.

The Board cannot share this view (see also point 33.2 of the impugned decision). The skilled person clearly understands from page 13, lines 6-11, that the provision of control pulses used as synchronisation signals is one embodiment of how to obtain images at fixed increments and that the skilled person is first instructed that images should be taken at fixed increments (page 13, lines 10-11), irrespective of how the increments were to be produced.

5.5 *Scanning section drive and output section drive - claims 3 to 5*

The opponent further argues that the features "scanning section drive" and "output section drive" of claims 3 to 5 are disclosed only in combination with other features, notably in operative association with a specific operation mode of the controller (e.g. on page 11, lines 6-9).

The Board cannot share this view (see also point 33.2 of the impugned decision). Claim 26 of the parent application as filed refers to "one or more product drives that are operable to drive the product through the scanning chamber", while Fig. 2 discloses which drives, e.g. "scanning section drive" and "output section drive", are present, thus providing adequate support without the additional features mentioned by the opponent.

5.6 *Stacker and chute - claim 6*

The opponent argues that the recitation of the stacker and chute in claim 6 omits essential structural elements disclosed in the last paragraph of page 19 and the first paragraph of page 20 of the parent application as filed.

Following the patent proprietor's view, the additional features relating to the stacker and chute as mentioned on pages 19 to 20 of the parent application as filed are not construed as being essential for the operation of the claimed arrangement and claiming of the stacker and chute without the additional features referred to by the opponent is construed to be justified.

5.7 *Meat slabs - claim 7*

The opponent further explains that meat slabs according to claim 7 have been originally disclosed only in combination with the provision of slicing of meat (claim 20 and page 1, second paragraph of the parent application as filed).

The Board cannot share this view (see point 33.2 of the impugned decision). Meat slabs are disclosed on page 12, second paragraph, line 2, of the parent application as filed. Further, the term "slicing apparatus" in claim 7 implies that meat slabs are sliced by the slicing apparatus.

5.8 The above was the preliminary opinion of the Board provided to the parties in the communication pursuant to Article 15(1) RPBA dated 10 April 2019, point 9., having taken into consideration the corresponding submissions of the parties dated 19 October 2015, 3 February 2015 (received on 3 February 2016) and 1 March 2016.

At the oral proceedings before the Board, both parties relied upon their written submissions on the issue of unallowable amendments (see second indent on page 4 of the minutes of the oral proceedings).

5.9 Under these circumstances, the Board - having once again taken into consideration all the relevant aspects concerning said issue - sees no reason to deviate from its above mentioned findings.

5.10 As a consequence, the Board is not convinced by the opponent's objections that claims 1 to 7 include



subject-matter which extends beyond the content of the parent application as filed (Article 76(1) EPC).

6. *Auxiliary request A2 - Novelty*

6.1 *Vis-à-vis D1*

The opponent contests the finding of the impugned decision that the subject-matter of claim 1 according to auxiliary request A2 is novel over the disclosure of D1.

The Board concurs with the patent proprietor's view that D1 cannot take away the novelty of the subject-matter of claim 1. Although claim 16 of D1 mentions that the projectors and cameras are protected by a housing, claim 16 further defines that the housing is provided **for each** of the projectors and cameras. Thus, a scanning chamber through which the products can be driven and in which products are scanned is a completely different technical teaching than the individual housings disclosed in D1. Further, the frame G of D1 is open while the technical function of the scanning chamber is to shield the scanning process from ambient light (see paragraph [0027] of the disputed patent). Thus, the frame G cannot constitute a scanning chamber according to claim 1.

It is further noted that in Fig. 1 of D1 the projectors PR are not arranged in the same plane. Therefore, it is construed to be hardly possible to project overlapping beams onto the product surface.

With regard to the line lasers, the Board is not convinced that the term "Linienprojektor" used in D1 is an implicit disclosure of a line laser in the sense of

the disputed patent. Since D1 does not mention the type of light source used in the "Linienprojektor", it cannot be deduced from D1 that the "Linienprojektor" uses lasers.

Therefore, the Board considers that the subject-matter of claim 1 is new over the disclosure of D1.

### 6.2 *Vis-à-vis D2*

The opponent contests the finding of the impugned decision that the subject-matter of claim 1 according to auxiliary request A2 is novel over the disclosure of D2.

The Board cannot share the opponent's view. Document D2 discloses an apparatus for cutting pieces of predetermined weight out of ham involving generation of a three-dimensional image of the ham using several cameras and projectors. However, the projectors 4 in D2 cannot be construed as being line lasers. Thus, D2 at least does not disclose line lasers as claimed in claim 1 according to auxiliary request A2.

### 6.3 *Vis-à-vis D3*

The opponent contests the finding of the impugned decision that the subject-matter of claim 1 according to auxiliary request A2 is novel over the disclosure of D3.

The Board notes that D3 suggest to subject not only the upper surface but the entire surface of the product to the scanning process (page 4, lines 56-61). However, the reference to the entire surface in D3 does not disclose a lower vision system according to claim 1.

Furthermore, several line lasers do not necessarily have overlapping laser beams. Following further the patent proprietor's view, D3 does not disclose a scanning chamber as claimed in claim 1, since the housing 16 is not suitable for driving the product through the housing and for scanning the product within the housing. The arrangement formed by the product feeding device 10, the housing 16 and the cutting device 14 do also not constitute a scanning chamber since they obviously do not shield the scanning process from ambient light (see point 6.1 above with regard to D1).

- 6.4 The above was the preliminary opinion of the Board provided to the parties in the communication pursuant to Article 15(1) RPBA dated 10 April 2019, point 13., having taken into consideration the corresponding submissions of the parties dated 7 October 2015, 19 October 2015 and 3 February 2015 (received on 3 February 2016).

At the oral proceedings before the Board, both parties relied upon their written submissions on the issue of novelty (see third indent on page 4 of the minutes of the oral proceedings).

- 6.5 Under these circumstances, the Board - having once again taken into consideration all the relevant aspects concerning said issue - sees no reason to deviate from its above mentioned findings.
- 6.6 As a consequence, the subject-matter of claim 1 is novel over the disclosure of both D1 and D2 (Articles 52(1) and 54(3) EPC) as well as over the disclosure of D3 (Articles 52(1) and 54(2) EPC).

7. *Auxiliary request A2 - Inventive step*

- 7.1 The opponent contests that the subject-matter of claim 1 of auxiliary request A2 involves an inventive step starting from D13/D13a as closest prior art in combination with the teaching of D15 and of D5 or the common general knowledge.

The opponent argues that there is no synergetic technical effect achieved by the distinguishing features 1.8 to 1.14 of claim 1. Rather, a plurality of partial problems arises, which are solved independently by the two sets of distinguishing features, namely by features 1.8 to 1.10 and by features 1.11 to 1.14.

The first partial objective technical problem solved by features 1.8 to 1.10 may be seen as how to exclude surrounding ambient light from the scanning area.

The skilled person faced with the first partial problem and using his common general knowledge would arrive at the claimed solution in an obvious manner, since D5 offers a scanning chamber as a solution to the problem of excluding surrounding light (shroud 32; column 2, lines 59-65) and, in principle, the use of a shielding scanning chamber would be obvious on its own.

The second partial objective technical problem solved by features 1.11 to 1.14 may be seen as avoiding shadowing.

The skilled person faced with the second partial problem would arrive at the claimed solution in an obvious manner, since D15 teaches to project two stripes of laser light as a solution to the problem of avoiding shadowing (page 3, second paragraph).

Since claims 5, 7 and 8 of D15 suggest that the laser stripes are co-planar or in coincident planes, the person skilled in the art would also be hinted to arrange overlapping beams in order to solve the problem of shadowing.

7.2 The Board cannot share this view for the following reasons.

7.2.1 Both parties agree that D13/D13a does not disclose the features 1.8 to 1.14 of claim 1 of auxiliary request A2.

7.2.2 The technical effect of the distinguishing features 1.8 to 1.10 resides in that ambient light is excluded so that the cameras may detect the line projected by the line lasers (see paragraph [0027] of the disputed patent).

The technical effect of the distinguishing features 1.11 to 1.14 resides in that more profile data and a better resolution of the camera image is provided (see paragraph [0036] of the disputed patent).

Contrary to the opponent's view, the Board considers that a common technical effect is achieved by the distinguishing features 1.8 to 1.14, namely achieving more and better surface profile data.

Thus, the objective technical problem can be seen in providing more and better profile data (see paragraph [0036] of the disputed patent).

7.2.3 The skilled person faced with this problem would find the solution neither in D15 nor in D5 nor in its common general technical knowledge.

Document D15 relates to a device for three-dimensional surface scanning of a moving object. The device includes a scanning device 2 comprising an enclosure in which at least a camera 4 including a lens 8, a laser 3 in combination with laser optics 7 producing stripes of laser light, and a data processor 5 are enclosed.

As a matter of fact, D15 does neither disclose nor suggest the arrangement of **two line lasers** disposed **on opposite sides** of the product such that the two line lasers project **overlapping beams** onto and across the product surface in order to yield more profile data and better resolution in the camera image.

Additionally, the Board is not convinced that the enclosure of D15 would be construed by the skilled person as a scanning chamber, as argued by the opponent, since the product can neither be accepted within it nor be driven through it.

It is noted that D5 seems to provide a scanning chamber by shroud 32 which is arranged to exclude ambient light from entering the chamber (column 2, lines 59-63).

However, even if, for the sake of argumentation, the skilled person would be prompted by the teaching of D5 or by its common general knowledge to provide a scanning chamber for exclusion of ambient light in the apparatus of D13/D13a, and even if the skilled person would be prompted by the teaching of D15 to project two laser stripes in the apparatus of D13/D13a, it would not have arrived at the subject-matter of claim 1,

since claim 1 requires further that two line lasers are disposed on opposite sides of the product and project overlapping beams onto and across the product. This is neither shown nor taught in D15, since a **single laser** is used to project at least two stripes (claim 1 and page 3, second paragraph). The fact that according to claims 7 and 8 of D15 the laser stripes are coplanar and in coincident planes does not mean that the stripes are also overlapping.

7.3 As a consequence, the opponent failed to persuade the Board that the combination of the teaching of D15 and of D5 or of the common general technical knowledge with the apparatus of D13/D13a would lead the skilled person to the subject-matter of claim 1 of auxiliary request A2 in an obvious manner.

#### 8. *Conclusion*

It follows from the above, that neither the appellant-patent proprietor nor the appellant-opponent convinced the Board of the incorrectness of the decision under appeal, for the appellant-patent proprietor with regard to the main request and auxiliary requests A and A1 and for the appellant-opponent with regard to auxiliary request A2.

**Order**

**For these reasons it is decided that:**

The appeals of both the patent proprietor and of the opponent are dismissed.

The Registrar:

The Chairman:



G. Nachtigall

I. Beckedorf

Decision electronically authenticated