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D E C I S I O N
of 27 July 2004

Case Number: T 0799/02 - 3.2.4

Application Number: 94830598.2

Publication Number: 0678250

IPC: A43D 25/18

Language of the proceedings: EN

Title of invention:

Method for applying glue to a surface of pieces of footwear
and device that carries out this method

Patentee:

F.LLI TALAMONTI MACCHINE S.n.c.

Opponent:

IRON FOX S.r.l

Headword:

-

Relevant legal provisions:

EPC Art. 100(a) and (b)

Keyword:

"Sufficiency of disclosure (yes)"
"Novelty (main request) (yes)"
"Inventive step (main request) (yes)"

Decisions cited:

T 0229/85, T 0322/86

Catchword:

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Case Number: T 0799/02 - 3.2.4

D E C I S I O N
of the Technical Board of Appeal 3.2.4
of 27 July 2004

Appellant:
(Opponent)

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Respondent:
(Proprietor of the patent)

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Representative:

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Decision under appeal:

Decision of the Opposition Division of the
European Patent Office posted 27 June 2002
rejecting the opposition filed against European
patent No. 0678250 pursuant to Article 102(2)
EPC.

Composition of the Board:

Chairman: M. Ceyte
Members: C. Scheibling
H. Preglau

Summary of Facts and Submissions

- I. By its decision posted 27 June 2002 the Opposition Division rejected the opposition which was based on Articles 100(a) EPC (54 and 56 EPC) and 100(b) EPC. On 26 July 2002 the appellant (opponent) filed an appeal and paid the appeal fee simultaneously. The statement setting out the grounds of appeal was received on 7 November 2002.
- II. The appellant requested that the decision under appeal be set aside and that the patent be revoked.
- III. The respondent (patentee) requested that the appeal be dismissed and that the patent be maintained as granted or that the patent be maintained on the basis of independent claims 1 and 7 filed with letter of 13 May 2003 by way of a first auxiliary request.
- IV. The following documents played a role in the appeal proceedings:
 - D1: EP-A-0 512 773
 - D2: WO-A-91/17021
 - D3: EP-A-0 499 423
 - D4: English translation of IT-A-1 247 178
 - D5: Catalogue "Sistema di Visione 3Z4SP", '92 - '93; Omron; with English translation

D6: Letter from Omron concerning technical information about vision system model 3Z4SP

D10: "Digital Image Processing" by R.G. Gonzalez and R.E. Woods, 1992, World Student Series, Addison-Wesley Publishing Company Inc. ISBN 0-201-60078-1

V. Claim 1 as granted reads as follows:

"1. Method for applying glue to a surface of pieces of footwear, characterised in that, it includes the following steps:

- placing a sole (30) on a first supporting means (9a), with the upper surface (31) of the said sole turned upward and with said sole freely resting on said supporting means (9a) with any possible orientation;
- transferring said sole (30), without changing its orientation, to a first station (S_1) where the outline is picked up, thus creating signals which are sent to a processing unit to determine a path extending close to the outline (30a) of the said sole (30);
- transferring said sole (30) to a second station (S_2), where a strip of glue is applied, along said path on the upper surface (31) of the said sole (30) by means of a glue applying means (25) moved in accordance with the outline of said sole previously picked up, said transferring between the said first and second stations being performed while keeping the same orientation of the said sole (30)."

Claim 7 as granted reads as follows:

"7. Device for applying glue to a surface of pieces of footwear, characterised in that, it includes:
means for supporting a sole (30) freely resting on said supporting means with the upper surface (31) turned upward;
means for transferring said sole (30) to a first station (S_1) without changing its orientation; pick up means (16,17,116,117,216,217) located in said first station (S_1) and designed to pick up the outline of the said sole (30), these picking up means being connected to an electronic processing unit (100) working in accordance with a predetermined programme;
means for transferring said sole (30) to a second station (S_2); at least one sprayer means (25,125) located in said second station (S_2) for directing a jet (26) of glue (27) towards the upper surface (31) of the said sole (30), the said sprayer means (25,125) being moved in two perpendicular directions according to instructions delivered by the said processing unit (100) so that glue (27,127) is applied to the said sole (30) along a path (P) extending close to the outline (30a) of the same sole (30) previously picked up."

VI. The appellant mainly argued that the aim of the invention is to provide a method or a device able to apply glue to a surface of pieces of footwear, regardless of the orientation of said pieces. However, in the view of the appellant, the proposed system can only work (the method can only be implemented) if a skilled person is able to program the components of the system in order to work together. However, there is neither a hint in the patent to such a program, nor can

such a program be considered to be part of the common knowledge of a skilled person. The appellant considered that such a program is neither disclosed nor rendered obvious by D5. Accordingly, if it were to be considered that such a program is not part of the common general knowledge, then the claimed method and device would not be sufficiently disclosed to be carried out by a skilled person. On the contrary, if it were to be considered that such a program falls within the common knowledge of a skilled person, then the subject-matter of the independent claims would not involve an inventive step with respect to D5.

The respondent mainly argued that picking up the shape of an object is known and has been performed for many years, that computer controlled robots are also known for many years and therefore, can well be considered to be part of the common general knowledge.

Concerning inventive step, the respondent argued that although different parts of the method (or device) fall within the general common knowledge, the method (or device) considered in its entirety does not. Especially the device disclosed in D5 would not be able to recognise and process an object different from the pre-stored shapes, and nothing could suggest a skilled person that D5 would be able to pick-up the outline of a shoe sole and to apply the obtained data to a glue spraying device for applying the glue to the sole.

Reasons for the Decision

1. The appeal is admissible.

2. *Article 100(b) EPC*

2.1 According to Article 100(b) EPC, opposition may be filed on the ground that the European patent does not disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art.

The Board wants to emphasize that Article 100(b) EPC (as well as Article 83 EPC) relates to the patent (respectively the patent application) and not to the sole claims, so that the claims cannot be affected by insufficiency of disclosure as stated by the appellant page 4 of the statement setting out the grounds of appeal.

2.2 As a matter of fact, in the present case, the patent specification in suit does not disclose how to program the device in order that the components of the device work together.

Thus, the question to be answered is whether a skilled person would be able to program the computer which controls the different components.

The Board holds that a skilled person would be able to program the computer if the needed program falls within the general common knowledge or if the program or a computer already comprising this program were available on the market before the priority date of the patent in suit.

2.3 D10 has been published in 1992 in the "World Student Series" and is thus a technical book for students, that can be found in university libraries. Therefore, D10 can be considered to reflect common knowledge in the given technical field. This is also confirmed by the appellant in the statement setting out the grounds of appeal, page 7, third paragraph and page 14, fourth paragraph.

D10 (chapter 7.1: "Detection of discontinuities", page 414 and chapter 7.2 "Edge linking and boundary detection", page 429) discloses techniques that may be used to pick-up (detect) by a video camera the edge (contour) of a certain object, in whichever orientation the object is arranged (in reference to Cartesian coordinates).

Thus, it can be considered that a program to pick-up the contour of an object in any possible orientation is common knowledge for a person skilled in the art.

Furthermore, in D6 it is indicated that an apparatus according to D5 (if programmed accordingly) is capable to pick-up the contour of an object in any possible orientation and to supply the corresponding data to other equipments.

2.4 Thus the remaining point is how to transmit the signals to the robot i.e. the "gluing station" so that the glue applying device carried by the robot arm is correctly positioned inside the outer contour of the sole. The appellant argued that it is not sufficient to detect the contour of the sole, since the robot arm shall not be positioned step by step on the actual X/Y coordinate detected by the software program during contour detection phase, but shall be slightly shifted

in either the horizontal and/or vertical directions in order to ensure that the glue falls on the surface of the sole and not outside of it.

However, from D5, which discloses a device available on the market, it is known to displace the robot arm with respect to a theoretical position so as to compensate for position errors of a printed circuit (see section 11, "Analysis of the Holes on a Printed Circuit Board and Displacement Compensation").

Thus, it is clear for a person skilled in the art that said device comprises software which is also able to calculate a shifted position for the robot arm, with respect to a theoretical position, so that glue applying device carried by the robot arm is in a displaced but controlled position, inside of the surface of the sole.

2.5 Thus, on the basis of the common general knowledge and by using a vision system such as that disclosed for example in D5 which is said to have been widely advertised (see page 6, second paragraph of the statement setting out the grounds of appeal), a person skilled in the art is able to carry out the invention of the patent in suit.

2.6 The appellant also argued that whichever algorithm is chosen to detect the contour of the sole, it is virtually impossible to ensure that the outline computed from a snapshot of such a sole, as taken by a video-camera, corresponds to the actual outline of the sole, because the digital representation suffers from staggering due to the so called "pixellization" of the object.

However, these findings concern the accuracy (quality) of the result to be obtained by the gluing station and not the ability of a skilled person to carry out the invention.

2.7 Therefore, the provisions of Article 100(b) EPC do not prejudice the maintenance of the patent as granted.

3. *Novelty - main request*

The Board is satisfied that the subject-matter of independent claims 1 and 7 as granted is novel over the opposed prior art. Since novelty was not at stake during these proceedings, there is no need for further substantiation of this matter.

4. *Inventive step - main request*

4.1 The appellant considered D5 to represent the closest prior art.

In the appellant's view D5 discloses all the features of claim 1, except that the shoe sole is freely resting on said supporting means with any possible orientation.

4.2 The Board does not share this point of view, since there are more distinctive features. The system according to D5 is not adapted for applying glue to a surface of pieces of footwear; D5 does not even disclose a glue applying means. Moreover, D5 does not describe two stations, a first one where the contour is picked up and a second one where a robot executes a working process in function of the data collected in

the first station. Thus, D5 discloses neither the necessary software nor all the necessary hardware.

- 4.3 According to the appellant the problem to be solved with respect to D5 is to pick up the outline of a sole arranged in any possible orientation. The Board cannot agree to the definition of the problem to be solved given by the appellant. Indeed, the problem to be solved cannot be defined in the terms of the distinguishing features which are part of the solution. According to the case law of the Boards of Appeal, the technical problem of the invention has to be formulated in such a way that it does not contain pointers to the solution or partially anticipate the solution, since including part of a solution offered by an invention in the statement of the problem necessarily has to result in an *ex post facto* view being taken of inventive step when the state of the art is assessed in terms of that problem (see T 229/85, EPO OJ 1987, 237, section 5; T 322/86, section 5).
- In the present case the problem to be solved could be seen in proposing an alternative automated and reliable method and a device for applying glue along a path which extends in a closed loop on the upper surface of a shoe sole, close to the border thereof in order to further reduce the production cost (see patent specification column 1, lines 13 to 53; column 2, lines 31 to 35).
- 4.4 Furthermore, a skilled person would not have chosen D5 as starting point for the invention, since D5 does not relate to pieces of footwear and since there are more

specific and technically more related prior art documents available.

4.5 But, even if starting from D5, a skilled person would have been obliged to adapt the system of D5 to the intended purpose, i.e. to provide the system of D5 with a gluing station able to apply glue to a shoe sole and with the necessary software.

The sole available documents which disclose gluing stations are D1 to D4. However, these citations (D1 to D4) and even D5 itself refer to systems where the object to be processed is placed on a supporting means in a predetermined position before being processed.

Thus, any combination of the teachings of said documents would likewise comprise a supporting means for receiving the object in a predetermined position. Although D10 discloses a suitable software, i.e. how to pick up the contour of an object resting on the supporting means with any possible orientation, there is no hint, neither in D10 nor in D1 to D5 that disposing an object on the supporting means with any possible orientation is compatible with an automated and reliable method and a device for applying glue along a path which extends in a closed loop on the upper surface of a shoe sole and could be of any benefit in reducing the production cost.

Consequently, the subject matter of claims 1 and 7 is neither disclosed nor suggested by the cited prior art.

4.6 The appellant also submitted that the system disclosed in D5 possesses the capabilities to carry out the invention.

However, inventive step cannot be denied just by stating that some of the claimed features are known

from D5, that some others fall within the common knowledge and that the system disclosed in D5 intrinsically possesses the capabilities to implement the remaining features of the independent claims of the patent in suit.

The simple fact that vision system of D5 possesses the capabilities to carry out part of the invention (once provided with the adequate software) is not sufficient to render the invention obvious. The point is not whether a skilled person could have arrived at the invention by modifying the prior art, but rather whether, in expectation of the advantages actually achieved (i.e. in the light of the technical problem addressed) he would have done so because of promptings in the prior art.

However, the appellant failed to explain why a skilled person would have modified D5 so as to arrive at the claimed invention.

4.7 The appellant further referred to paragraph 4, page 3 of D5 where it is stated:

"BASIC OVL (OMRON VISION LANGUAGE) is a specialized programming language that besides the normal set of BASIC instructions is provided with a broad group of commands which allow to easily manage the image processing and control the operation function of 3Z4SP." The appellant deduced from this passage that the skilled person is given an explicit suggestion not to limit the use of the camera to the samples given. The Board can agree to this; however said passage does not identify any other precisely defined kind of objects which could be processed by the vision system of D5. Consequently, a skilled person would be obliged to exercise inventive skill to find further

applications and to program accordingly the vision system of D5.

- 4.8 The appellant also proposed a redrafted claim 1 in order to work out the "core of the invention" (see first paragraph of page 12 of the statement setting out the grounds of appeal).

The appellant himself made the following comments:

"Having now set forth what the prior art was and what the common general knowledge was, it is possible to define the core of the invention in form of a claim which could read as follows..."

The Board cannot agree to this way of proceeding. Indeed, the prior art portion of a claim drafted in the two part form shall comprise solely the features known from one (the closest) prior art and not all features known in combination from a prior art document and from the common general knowledge. Therefore, the way in which the appellant divided the claim into a prior art portion and a characterizing portion is misleading and the conclusion drawn by the appellant, i.e. that the core of the invention is to be seen in the teaching that the glue applying means are moved along the outline of the sole, without having predefined outlines stored in a memory, is not acceptable.

- 4.9 Consequently, the appellant has failed to establish why, starting from D5, a person skilled in the art would arrive in an obvious manner at the claimed subject-matter.

Accordingly, in the Board's judgment, the subject-matter of independent claims 1 and 7 of the patent in suit involves an inventive step.

5. Thus the grounds for opposition do not prejudice the maintenance of the patent as granted.

Order

For these reasons it is decided that:

The appeal is dismissed

The Registrar:

The Chairman:

G. Magouliotis

M. Ceyte