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D E C I S I O N
of 16 October 2002

Case Number: T 0909/00 - 3.2.7

Application Number: 95902268.2

Publication Number: 0699168

IPC: B65H 19/29

Language of the proceedings: EN

Title of invention:

Device for gluing the tail end of a reel of web material

Patentee:

FABIO PERINI S.p.A

Opponent:

Paper Converting Machine Company

Headword:

-

Relevant legal provisions:

EPC Art. 54, 56

Keyword:

"Novelty (yes)"
"Inventive step (yes)"
"Late filed document (admitted)"
"*Reformation in peius* (no)"

Decisions cited:

-

Catchword:

-



Case Number: T 0909/00 - 3.2.7

D E C I S I O N
of the Technical Board of Appeal 3.2.7
of 16 october 2002

Appellant: FABIO PERINI S.p.A
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Representative: Mannucci, Gianfranco, Dott.-Ing.
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Respondent: Paper Converting Machine Company
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Representative: Ruschke, Hans Edvard, Dipl.-Ing.
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Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 5 July 2000
revoking European patent No. 0 699 168 pursuant
to Article 102(1) EPC.

Composition of the Board:

Chairman: A. Burkhart
Members: P. A. O'Reilly
J. H. P. Willems

Summary of Facts and Submissions

- I. The appellant (patent proprietor) filed an appeal against the decision of the Opposition Division to revoke the European patent No. 0 699 168.
- II. Opposition was filed against the patent as a whole and based on Article 100(a) EPC (lack of novelty and lack of inventive step), and Article 100(b) EPC (insufficient disclosure of the invention).

The Opposition Division held that the subject-matter of each of the requests on file before them did not involve an inventive step.

The most relevant documents for the present decision are:

D3: US-A-5 242 525

D6: JP-A-50 35562 (in its translated form)

D8: EP-A-0 481 929

D11: GB-A-1 495 445 (filed during the appeal proceedings)

- III. The appellant requested that the decision of the Opposition Division be set aside and the patent be maintained on the basis of their main request filed with the grounds of appeal on 18 October 2000 (identical to the main request before the Opposition Division) and comprising claims 1 to 7.

The independent claims of the main request read as

follows:

"1. Device for gluing the tail end (LF) of a reel (L) of wound web material, comprising: conveying means (5, 21) for moving the reel; unwinding means (7, 9) for unwinding the tail end (LF) of the web material when said reel is in an unwinding position; a dispenser (11) of glue (C) for applying the glue to the reel (L), arranged downstream of said unwinding position; and means (21) for rewinding the tail end after the glue (C) has been applied; said dispenser (11) including an upwardly oriented slit (155) from which the glue is dispensed;

characterized in that

said dispenser (11) includes a container (151) for the glue with said upwardly oriented slit (155) and a moving member (157) positioned inside said container, which is immersed in the glue contained in the container (151) and moved towards said upwardly oriented slit (155) in order to dispense the glue to the reel as it rolls over said slit."

"7. Method for gluing the tail end (LF) of a web material wound to form a reel (L), in which the tail end (LF) is detached from the surface of the reel and unwound from it to a predetermined length; the reel is rolled, with tail end unwound therefrom, over a slit (155) from which glue (C) is dispensed, to apply said glue to a portion of the web material which is still wound up on the reel (L); and the tail end is rewound onto the reel;

characterized in that

said glue is contained in a container (151) arranged under said slit (155) and is cyclically picked up by a moving member (157) arranged in said container, said

moving member (157) bringing said glue (C) in correspondence of said dispensing slit (155) and being in its upper position when the reel (L) is made to roll over said slit (155)."

The appellant further requested that the ground of novelty not be admitted into the appeal proceedings and that document D11 not be admitted into the appeal proceedings. The appellant also filed auxiliary requests which did not need to be considered.

The respondent (opponent) requested that the appeal be dismissed.

IV. The appellant argued in written and oral submissions essentially as follows:

The ground of novelty should not be admitted into the appeal proceedings since the Opposition Division had decided that the subject-matter of the claims was novel. If the respondent had wished to pursue the ground of novelty then the respondent should have filed an appeal on this ground.

Document D11 should not be admitted into the proceedings as it was late filed and is not relevant. As the document is a family member of a document cited in the search report for document D8 cited by the respondent, the respondent must have known about this document throughout the opposition proceedings. The respondent should not therefore wait until the appeal proceedings to file the document. The respondent has argued in his written submission that the document is relevant as it shows a moving member as an alternative to squirting nozzles with an overflow tray. However,

the document does not show an overflow tray but rather a collecting tray. The basis given by the respondent for introducing the document does not therefore correspond to the disclosure of the document.

The subject-matter of claim 1 is novel over document D6. A slit is disclosed only with respect to the first embodiment of D6 in which glue is applied by nozzles. A slit is not disclosed with respect to the second embodiment in which glue is applied by a roller, bar or wire. In the case of the second embodiment a slit would also not be necessary. For this reason a member moving towards the slit is not disclosed. It is also not disclosed that the glue is dispensed as the reel rolls over the slit.

Starting from document D3 the problem to be solved is to provide a gluing device of the type described therein in which it is possible not to apply glue to a reel as it passes the dispenser. The skilled person would not consider document D6 as the teaching of this document represents old technology in which the reels are stopped to allow application of the glue. Document D3 on the other hand discloses a device which includes new technology allowing high speed continuous operation. Document D6 does not mention or disclose a solution to the objective problem. The skilled person would not therefore consider document D6 when looking for a solution to the problem. In document D6 the problem of defective reels would have been solved upstream of the gluing station as defective rolls would come to rest in the tail sealer and not be processed. The same applies to the disclosure of document D11. The respondent is wrong with his assertions regarding document D11 since the device disclosed therein does

not include a moving member as an alternative to an overflow tray. The tray disclosed in document D11 is not an overflow tray but a collecting tray. Document D11 also does not disclose a moving member moving towards an upwardly orientated slit.

- V. The respondent argued in written and oral submissions essentially as follows:

Document D11 is relevant as it shows a moving member which applies glue to a rolling work piece. Also, it shows the moving member as an alternative to squirting nozzles with an overflow tray. The document is filed late because the appellant has argued that the prior art does not show a moving member applying glue to a rolling work piece. The document is filed to counter this argument which has been used in the proceedings by the appellant.

Claim 1 lacks novelty over document D6. In addition to the other features of the claim the document discloses a dispenser downstream of the winding position. The position is downstream of the winding position since unwinding starts before the roll arrives above the dispenser, and in some instances the unwinding would be completed before arrival above the dispenser, i.e. at a position upstream of the dispenser. The dispenser includes an upwardly directed slit since there is a specific reference to a slit. There is a container for glue and a moving member which is immersed in the glue since there is an embodiment in document D6 which refers to wire or bar which may be raised from a glue tank. The glue may be dispensed to the reel as the reel rolls over the slit since, in use in some instances, the tail end of the reel will fall into the gap

containing the dispenser and immediately activate a sensor which will cause the glue to be applied and the reel to be immediately rolled out. In this particular operational situation the reel will not dwell in the tail sealer and the glue is dispensed as the reel rolls over the slit.

Claim 1 lacks an inventive step. Document D3, or document D8, may be considered to be the nearest prior art document. The problem to be solved is to provide a gluing device for tail ends in which it is possible not to apply glue to a reel as the reel passes the dispenser. In document D6 the device includes a detector for the tail end and the gluing device is activated in response to a signal from the detector (see paragraph commencing on page 4, line 7). The device also includes a member (see page 4, lines 19 to 22) which is moved towards the reel in order to glue the tail end. Therefore, the device of document D6 already overcomes the objective problem since in the absence of a tail end, i.e. the tail end has not unwound correctly, the detector will not give a signal and will not activate the member to effect a gluing action. Any minor differences of the disclosure of document D6 to the claim are simple engineering modifications. The solution to the problem is also found in document D11. It is indicated in document D11 (see page 3, lines 16 to 26) that glue is only applied when the tail end reaches a given position detected by the photoelectric detection system. If there is no tail then the moving member 16 will not be actuated to apply glue. There is no prejudice against changing the glue dispenser of the device disclosed in document D3 as the document indicates that other types of glue dispenser may be used (cf. column 4, line 12). The same applies

to document D8 (cf. column 6, lines 18 to 20). In document D11 the first embodiment which includes a member moved towards the reel to apply glue is an alternative to a second embodiment in which glue is applied by nozzles and collected by an overflow tray. Therefore the skilled person realises that the first embodiment is also an alternative to the dispenser disclosed in document D3 which includes an overflow tray.

With regards to claim 7, no extra comments are necessary.

Reasons for the Decision

Admissibility into appeal proceedings of the ground of novelty

1. This ground was included in the grounds of opposition by the respondent and was argued before the Opposition Division who decided that the subject-matter of the claims was novel. The arguments of the appellant against the admission of the ground are based on the principle of *reformatio in peius*. In his argument that the respondent should himself have filed an appeal if he wished the ground to be considered the appellant has overlooked the fact that the respondent was not entitled under Article 107 EPC to file an appeal. The decision of the Opposition Division was to revoke the patent. The respondent was not adversely affected by this decision and hence was not entitled to file an appeal. Moreover, the principle of *reformatio in peius* does not apply in the present case to the appellant. The patent has been revoked. In filing an appeal the appellant cannot find himself in a worse situation than

that situation, so that the outcome of the appeal cannot be worse for the appellant than if he had filed no appeal at all.

Admissibility of a new document in appeal proceedings

2. The document D11 was filed by the respondent one month before the oral proceedings before the Board of Appeal. The document discloses a moving member which applies glue to a rolling reel. This disclosure has not been disputed by the appellant. The document does therefore include features possibly relevant to the question of inventive step which are not disclosed in any of the other documents cited previously. The document is a short document and the appellant had a sufficient amount of time to familiarise himself with its contents. The document may also reasonably be considered as intended to counter an argument of the appellant concerning document D6, namely that in document D6 the reel must be in a stationary position before the moving member is activated (page 4 of submission of the appellant dated 8 June 2001). The document does not therefore move outside the existing legal and factual framework of the appeal proceedings.

The document is therefore admitted into the proceedings.

Main request

Novelty

3. Document D6 does not disclose all the features of claim 1.

The document does not disclose that the dispenser is disposed downstream of the unwinding position. According to claim 1 the unwinding means unwinds the tail when the reel is an unwinding position. This defines the unwinding position as a particular position with respect to the unwinding means. In document D6 the position of the reel at which the unwinding means (rollers 3 and 4) unwind the tail is a position directly above the dispenser and hence the dispenser is not downstream of the unwinding means. The argument of the respondent that in some cases the reel may unwind itself downstream of the dispenser without the help of the unwinding means is not relevant since that unwound position of the reel is not the unwinding position of the device as defined in claim 1.

Document D6 does not disclose a moving member which is moved upwardly towards an upwardly orientated slit. Document D6 discloses two embodiments of the glue dispenser. The first embodiment is a set of nozzles which spray glue onto the reel. It is stated in document D6 that for gluing by the spray of glue the nozzles are housed in a chamber having a slit so as to allow the glue to spray out through the slit to lessen the spray width of liquid glue (page 5, lines 24 to 28). In the second embodiment a roller, wire or bar can be raised from within a glue tank to apply the glue (page 4, lines 19 to 22). This second embodiment is stated to be a substitute for a gluing device in the form of glue liquid nozzles. There is no indication in document D6 that the slit should also be provided in the second embodiment. When the slit is mentioned in the document it is specifically only mentioned with respect to the first embodiment and has a stated function - lessening spray width - which only has a

sense in connection with the first embodiment. The combination in a single embodiment of a moving member and an upwardly orientated slit is not therefore disclosed in document D6.

Document D6 does not disclose that the moving member dispenses the glue to the reel as it rolls over the slit. In document D6 the reel 1 comes to the rollers 3 and 4 which unwind the reel until a detector detects the tail end. The dispensing device is then activated to apply glue. Thereafter a roll-out device 10 pushes the reel away from the unwinding position. During the action of applying glue the reel may or may not be rotating, but in either case there is no translational motion of the axis of the reel. The reel cannot therefore be considered to be rolling which requires a combination of a rotating and a translational movement. The dispensing of the glue does not therefore take place as the reel is rolling.

The above considerations also apply to the subject-matter of claim 7 whereby the features that the reel is rolled with the tail end unwound over a slit, that a moving member brings glue to a dispensing slit, and that the moving member is in its upper position when the reel is made to roll over the slit, are not disclosed in document D6.

Therefore, the subject-matter of claims 1 and 7 is novel over document D6.

Inventive step

4.1 Nearest prior art

Both parties agreed that document D3 represents the nearest prior art document. When considering document D3 in the light of claim 1 both parties considered that there were two possible interpretations of document D3 regarding which parts of the device disclosed therein corresponded to the slit specified in claim 1. The slit might be considered to be either the outlet of the dispenser 58 or to be formed between the end wall 53 and the shelf 60. Both parties preferred the second interpretation. In the view of the Board however there is only one interpretation of document D3 which is consistent with the disclosure of D3 and the other features of claim 1, namely the first interpretation of document D3. Claim 1 not only specifies a slit but also that there is a container for the glue with the upwardly orientated slit. In the second interpretation it is necessary to consider the end wall 53 and shelf 60 as also forming the container. These features however clearly do not form a container. This inconsistency does not arise with the first interpretation. Moreover, the document specifically discloses a "dispenser 58". This dispenser is explicitly disclosed as having a slit (column 4, lines 12 to 15, whereby there is a specific cross-reference to the dispenser of document D8 which has an explicit disclosure of a slit). In consideration therefore of the features of claim 1 that are disclosed in document D3 the Board adopts the first interpretation of the document.

On this basis of the interpretation of the Board as set out above document D3 discloses the following features of claim 1:

A device for gluing the tail end of a reel of wound web

material, comprising conveying means for moving the reel; unwinding means for unwinding the tail end of the web material when said reel is in an unwinding position; a dispenser of glue for applying the glue to the reel, arranged downstream of said unwinding position; and means for rewinding the tail end after the glue has been applied; said dispenser including an upwardly oriented slit from which the glue is dispensed; the dispenser including a container for the glue with the upwardly oriented slit from which the glue is dispensed to the reel as the reel rolls over said slit.

4.2 Problem to be solved

A problem to be solved by the invention is to provide a gluing device of the above described type in which it is possible not to apply glue to a reel as it passes the dispenser. Both parties agreed with this problem.

4.3 Solution to the problem

In accordance with claim 1 the problem is solved by the provision of the following distinguishing features:

A moving member positioned inside said container, which is immersed in the glue contained in the container and moved towards said upwardly oriented slit in order to dispense the glue to the reel as it rolls over said slit.

4.4 This solution to the problem is not obvious for the following reasons:

Document D3 concerns a type of gluing device in which

the reels roll over a slit in a glue dispenser. As the reels roll over the slit there is no relative translational movement of the reel surface relative to the slit, even though the axis of the reel continues its translational movement. This means that the reels do not have to be stopped for their tail ends to be glued and there is no smearing. Since the reels do not have to stop when being glued the device can be operated at a high speed. The skilled person therefore when considering the problem with the device of document D3 will wish to solve the problem without impeding the high speed operation. Otherwise, the essential advantage of the type of device disclosed in document D3 will be lost.

Document D6 discloses a type of glue applicator in which the axis of the reel is brought to a stop in order apply the glue. The glue may be applied either by spray nozzles or by a moving member. The skilled person when considering document D6 would be prejudiced against its usefulness for solving the problem as the dispenser disclosed therein requires the stoppage of the reel. Even if the skilled person considered the teaching of document D6 further, and in particular the embodiment which includes a moving member, he would not arrive at the invention. The device according to document D6 first brings the reel to a position above the dispenser. In this position the tail end of the reel is unwound and then the moving member applies the glue to the reel, though not via a slit in the container as already indicated in the consideration of document D6 for novelty. If the moving member were to be in a dispensing position as the reel rolls to the dispensing position then the outer surface of the reel would receive glue at an unsuitable portion of its

circumference as the tail end would not yet be unwound. The dispenser as disclosed in document D6 is thus unsuitable for use with a device wherein the reels should not stop their translational movement during the gluing process. The skilled person would not therefore find a solution to the problem in document D6. The argument of the respondent that the detector disclosed in document D6 recognises reels that are not unwound does not alter this fact. Moreover, document D6 does not indicate what happens when such a wound reel is recognised by the detector. There is no disclosed provision in document D6 for moving the reel on without the application of glue.

Document D11 discloses a gluing device in which the reels are rolled along a curve between a belt conveyor 10 and a roller 9. The glue is applied by a row of aligned brushes 16 which are attached to a rotatable member. The brushes come in contact with the glue when they are in a horizontal position. There is a tank for glue positioned beneath the rotational axis of the rotatable member. The brushes rest in the glue until they are actuated. The reel is first unwound and then, whilst it is rolling, the rotatable member is actuated to rotate. During this rotation the brushes come into sweeping contact with a portion of the surface of the reel. The reel is then rewound.

Document D11 does not disclose any feature which could fall within the scope of the term "slit" and hence logically does not disclose an upwardly oriented slit as specified in claim 1. Document D11 also does not disclose that the reel has a rolling contact relative to the brushes. Even if the skilled person were to consider incorporating the teaching of document D11 into the device disclosed in document D3 he would not

arrive at a device in accordance with claim 1, since as shown above, document D11 does not disclose all the distinguishing features of claim 1. Also the distinguishing features of claim 1 which are not disclosed in document D11 would not be obvious to the skilled person. The construction of the device of document D11 with a row of rotating brushes requires that there is a reasonable space available along the movement path of the brushes for the brushes to come into contact with the reel. Such a reasonable space would have a width which could not be construed as a slit. Also, the basic principle behind the teaching of document D11 is different to that of document D3. In document D3 and the distinguishing features of claim 1 the dispenser is arranged such that glue is positioned in the path of the reel as the rolls over this position. In document D11 the glue is moved into contact with the reel when the reel reaches a particular position. These two different manners of achieving contact are different and there is no reason for the skilled person to change the teaching of document D11 in this respect. Therefore even if the skilled person did consider the teaching of document D11 with a view to solving the problem he still would not arrive at a device in accordance with claim 1.

With regard to the detector disclosed in document D11 the same view expressed with respect to the detector disclosed in document D6 also applies to document D11.

The method claim 7 contains method steps corresponding to the apparatus features of claim 1. The above considerations of inventive step therefore also apply to the subject-matter of claim 7.

- 4.5 Therefore, the subject-matter of claims 1 and 7 of the main request involves an inventive step in the sense of Article 56 EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the first instance with the order to maintain of the patent in amended form on the basis of the following documents:
 - claims 1 and 7 according to the main request as filed on 18 October 2000,
 - claims 2 to 6 as granted,
 - description columns 1 and 2 of the main request as filed on 12 September 2002 and description columns 3 to 6 as granted,
 - figures as granted.

The Registrar:

The Chairman:

.../...

D. Spigarelli

A. Burkhart