BESCHWERDEKAMMERN DES EUROPÄISCHEN PATENTAMTS

BOARDS OF APPEAL OF THE EUROPEAN PATENT OFFICE

CHAMBRES DE RECOURS DE L'OFFICE EUROPEEN DES BREVETS

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

D E C I S I O N
of 20 December 2004

Case Number: T 1242/01 - 3.2.7

Application Number: 95922710.9

Publication Number: 0766641

IPC: B65H 19/18

Language of the proceedings: EN

Title of invention:
Device and method for the automatic exchange of reels or web material

Patentee:
FABIO PERINI S.p.A.

Opponent:
Paper Converting Machine Company

Headword:
-

Relevant legal provisions:
EPC Art. 123(2), 56

Keyword:
"First and second auxiliary requests: Admissibility of the amendments (no)"
"Third auxiliary request: Admissibility of the amendments (yes); Inventive step (yes)"

Decisions cited:
-

Catchword:
-

Europäisches Patentamt | European Patent Office | Office européen des brevets

Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 1242/01 - 3.2.7

D E C I S I O N
of the Technical Board of Appeal 3.2.7
of 20 December 2004

Appellant: (Opponent)	Paper Converting Machine Company 2300 South Ashland Avenue P.O. Box 19005 Green Bay Wisconsin 54307-9005 (US)
Representative:	Ruschke, Hans Edvard, Dipl.-Ing. Ruschke Hartmann Becker Pienzenauerstrasse 2 D-81679 München (DE)
Respondent: (Proprietor of the patent)	FABIO PERINI S.p.A. Via per Mugnano I-55100 Lucca (IT)
Representative:	Mannucci, Gianfranco, Dott.-Ing. Ufficio Tecnico Ing. A. Mannucci Via della Scala 4 I-50123 Firenze (IT)
Decision under appeal:	**Decision of the Opposition Division of the European Patent Office posted 19 October 2001 rejecting the opposition filed against European patent No. 0766641 pursuant to Article 102(2) EPC.**

Composition of the Board:

Chairman: A. Burkhart
Members: K. Poalas
C. Holtz

Summary of Facts and Submissions

I. The appellant (opponent) lodged an appeal against the decision of the Opposition Division rejecting the opposition against the European patent No. 0 766 641.

The opposition was filed against the patent as a whole based on Article 100(a) EPC (lack of novelty and lack of inventive step) and Article 100(c) (extension beyond the content of the application as filed).

The Opposition Division held that the grounds for opposition mentioned in Articles 100(a) and (c) EPC did not prejudice the maintenance of the patent as granted.

II. Oral proceedings before the Board of Appeal took place on 20 December 2004.

(a) The appellant requested that the decision under appeal be set aside and that the patent be revoked.

(b) The respondent requested that the decision under appeal be set aside and the patent be maintained in amended form on the basis of one of the first, second or third auxiliary requests filed on 20 December 2004.

(c) Claim 1 according to the first auxiliary request reads as follows:

"A device for the automatic exchange of a first reel (BX), on which a first web (N1) fed to a rewinding machine is wound, with a second reel

(BY) on which a second web (N2) is wound, the device comprising:

- at least one pair of supports (15X, 15Y) for the said reels (BX, BY), movable in a direction parallel to the axis of the said-reels;

- fixed to each of said supports (15X, 15Y) a respective first retaining member (69, 69A) for the leading end of said second web (N2), each of said first retaining members being movable with the corresponding support between a lateral waiting position and a position of alignment with a second retaining member (75, 75A) for the trailing end of said first web (N1), said second retaining member being carried by an element (71);

- pressing means (81, 83, 101, 103) to press the trailing end of the said first web (N1) against the leading end of the said second web, causing them to be joined together;

- a cutting means (77) to cut the said first web (N1) to form the said trailing end;

characterized in that said element (71) carrying said second retaining member (75, 75A) is movable, control means being provided to control said second retaining member (75, 75A) such as to move the trailing edge of the first web (N1) away from the relevant support (15X; 15Y) carrying the first reel before said support is moved away from the position of alignment with said second retaining member; and that each one of said first retaining members (69, 69A) is associated with a bearing surface (63) which the second retaining member (75, 75A) is made to approach, said bearing surface being movable integrally with the respective first retaining member (69, 69A) and

being disposed before said first retaining member with respect to the direction of advance of the web being unwound from the corresponding reel, the second retaining member (75, 75A) being controlled by said controlling means to approach the relevant bearing surface (63) to grip the trailing edge created by the cut."

Claim 1 according to the second auxiliary request reads as follows:

"A device for the automatic exchange of a first reel (BX), on which a first web (N1) fed to a rewinding machine is wound, with a second reel (BY) on which a second web (N2) is wound, the device comprising:

- at least one pair of supports (15X, 15Y) for the said reels (BX, BY), movable in a direction parallel to the axis of the said-reels;

- fixed to each of said supports (15X, 15Y) a respective first retaining member (69, 69A) for the leading end of said second web (N2), each of said first retaining members being movable with the corresponding support between a lateral waiting position and a position of alignment with a second retaining member (75, 75A) for the trailing end of said first web (N1), such that when one of said first retaining members (69, 69A) is in the waiting position, the other is aligned with said second retaining member (75, 75A) and vice-versa, said second retaining member being carried by an element (71);

- pressing means (81, 83, 101, 103) to press the trailing end of the said first web (N1)

against the leading end of the said second web, causing them to be joined together;

- a cutting means (77) to cut the said first web (N1) to form the said trailing end;

characterized in that

- each one of said first retaining members (69, 69A) is associated with a bearing surface (63) movable integrally with the respective first retaining member (69, 69A) and being disposed before said first retaining member with respect to the direction of advance of the web being unwound from the corresponding reel; and control means are provided which control said element (71) carrying said second retaining member (75, 75A) to move it to approach said bearing surface such that the trailing end of said first web (N1) is retained between said second retaining member (75, 75A) and the opposing bearing surface (63), and to subsequently move the trailing edge of the first web (N1) away from the relevant support (15X; 15Y)."

Claim 1 according to the third auxiliary request reads as follows:

"A device for the automatic exchange of a first reel (BX), on which a first web (N1) fed to a rewinding machine is wound, with a second reel (BY) on which a second web (N2) is wound, the device comprising:

at least one pair of supports (15X, 15Y) for the said reels (BX, BY), movable in a direction parallel to the axis of the said-reels;

fixed to each of said supports (15X, 15Y) a respective first retaining member (69, 69A) for the leading end of said second web (N2), each of said first retaining members being movable with the corresponding support between a lateral waiting position and a position of alignment with a second retaining member (75, 75A) for the trailing end of said first web (N1), said second retaining member being carried by an element (71); pressing means (81, 83, 101, 103) to press the trailing end of the said first web (N1) against the leading end of the said second web, causing them to be joined together;
a cutting means (77) to cut the said first web (N1) to form the said trailing end;
characterized in that said element (71) carrying said second retaining member (75, 75A) is movable such as to move the trailing edge of the first web (N1) away from the relevant support (15X; 15Y); and that each one of said first retaining members (69, 69A) is associated with a bearing surface (63) which the second retaining member (75, 75A) is made to approach, said bearing surface being movable integrally with the respective first retaining member (69, 69A) and being disposed before said first retaining member with respect to the direction of advance of the web being unwound from the corresponding reel; and that said pressing means (81, 83, 101, 103) are arranged downstream of said second retaining member (75, 75A) and upstream of the first retaining member (69, 69A) with respect to the web feeding direction."

II. The appellant argued essentially as follows:

(a) First auxiliary request

Claim 1 of the first auxiliary request contains in its characterising part inter alia the new expression "carrying the first reel before said support is moved away from the position of alignment with said second retaining member". With this new expression a specific sequence of movement of the second retaining member is claimed.

The alleged basis for this expression on page 11, last paragraph to page 12, second paragraph of the application as originally filed refers to the specific apparatus according to figures 5 to 7 having a cutting blade 77 fixed on the top of the second suction member 75. The introduction of said expression into the amended claim 1 without any correlation to the specific features of the apparatus according to figures 5 to 7 is an undue generalisation of a part of a specific embodiment and contravenes the requirements of Article 123(2) EPC.

(b) Second auxiliary request

Claim 1 of the second auxiliary request contains in its characterising part the following new underlined words "control means are provided which control said element (71) carrying said second retaining member (75, 75A) to move it to approach said bearing surface such that the trailing end of said first web (N1) is retained between said second retaining member (75, 75A) and the opposing bearing surface (63), and to subsequently move the

trailing edge of the first web (N1) away from the relevant support (15X; 15Y)". With these new expressions a specific sequence of movement of the second retaining member is claimed.

The alleged basis for this wording on page 11, last paragraph to page 12, second paragraph of the application as originally filed refers to the specific apparatus according to figures 5 to 7 having a cutting blade 77 fixed on the top of the second suction member 75. The introduction of said expressions into the amended claim 1 without any correlation to the specific features of the apparatus according to figures 5 to 7 is an undue generalisation of a part of a specific embodiment and contravenes the requirements of Article 123(2) EPC.

(c) Third auxiliary request

The only difference between the subject-matter of claim 1 and the device known from document D5 (US 4 392 912 A) is the movability of the element carrying the second retaining member and the fact that the second retaining member is made to approach the bearing surface. In the device of document D5 the second retaining member consists of the suction ports 43 and is carried by an affixed element 36. In operation however, the second retaining member cooperates with a pusher assembly 37, which is disposed on the opposite side of the web with respect to the second retaining member and has the effect of pushing the web into contact with the second retaining member.

The problem seen in the patent in suit is to improve the clearance immediately prior to the actual splicing operation.

Document D8 (US 4 708 300 A) shows an arrangement which allows the automatic cutting of web from an old roll and splicing the web from the new roll to allow continuous unwinding. When it is necessary to change reels the web is cut and then the cut end is gripped by retaining members comprising suction cups 44 on a swing down arm element and swung away from its former position to provide clearance, allowing the new reel to be moved into position (see column 3, lines 9-15). The person skilled in the art would learn from document D8 that when changing reels it is advantageous to hold the trailing end of the old web and move it away from its former position for the purpose of freeing the space for the new reel to come in.

The person skilled in the art, faced with the problem to obtain a clear path for the new reel entering the system, would thus adopt the solution proposed in document D8, which is to swing the trailing end of the old web away from the reel supports. When applying this solution in an arrangement according to document D5, the person skilled in the art arrives at the device according to claim 1.

Therefore, the device according to claim 1 does not involve an inventive step.

III. The respondent argued essentially as follows:

(a) First auxiliary request

Claim 1 of the first auxiliary request contains in its characterising part inter alia the new expression "carrying the first reel before said support is moved away from the position of alignment with said second retaining member".

This expression is derivable from page 11, last paragraph to page 12, second paragraph of the application as originally filed. The second paragraph on page 4 and the bridging paragraph of pages 10 and 11 of the originally filed application teach that the cutting means can be positioned separately from the moving element and that the retaining member has not to be a suction member undergoing an oscillating movement. On the basis of this teaching it is obvious to the skilled person that although the specific sequence of operation described on page 11, last paragraph to page 12, second paragraph of the application as originally filed concerns the movement of parts of the specific apparatus according to figures 5 to 7 having a cutting blade 77 fixed on the top of the second suction member 75, the incorporation of said specific sequence of movement into claim 1 without any reference to the specific features of the apparatus according to figures 5 to 7 is allowable under Article 123(2) EPC, since said specific features are not compulsory for the implementation of the invention.

(b) Second auxiliary request

Claim 1 of the second auxiliary request contains in its characterising part the following new underlined words "control means are provided which control said element (71) carrying said second retaining member (75, 75A) to move it to approach said bearing surface such that the trailing end of said first web (N1) is retained between said second retaining member (75, 75A) and the opposing bearing surface (63), and to subsequently move the trailing edge of the first web (N1) away from the relevant support (15X; 15Y)".

This wording is derivable from page 11, last paragraph to page 12, second paragraph of the application as originally filed. The second paragraph on page 4 and the bridging paragraph of pages 10 and 11 of the originally filed application teach that the cutting means can be positioned separately from the moving element and that the retaining member has not to be a suction member undergoing an oscillating movement. On the basis of this teaching it is obvious to the skilled person that although the specific sequence of operation on page 11, last paragraph to page 12, second paragraph of the application as originally filed concerns the movement of parts of the specific apparatus according to figures 5 to 7 having a cutting blade 77 fixed on the top of the second suction member 75, the incorporation of said specific sequence of movement into claim 1 without any reference to the specific features of the apparatus according to figures 5 to 7 is allowable under Article 123(2) EPC, since said specific features are not compulsory for the implementation of the invention.

(c) Third auxiliary request

A device according to the preamble of claim 1 is known from document D5.

The problem seen in the patent in suit is to improve the clearance immediately prior to the actual splicing operation and to operate the device faster.

In accordance with claim 1 of the third auxiliary request the above-mentioned problem is solved by the features of the characterising part.

The skilled person would not combine the teachings of documents D5 and D8 since the incorporation of the swing arm known from document D8 is not compatible with the structure according to document D5. Moreover, none of documents D5 or D8 teaches the specific positioning of the pressing means downstream the second retaining member with respect to the web feeding direction.

Therefore, the subject-matter of claim 1 of the third auxiliary request involves an inventive step.

Reasons for the Decision

1. *First auxiliary request*

The new expression "control means being provided to control said second retaining member such as to move the trailing edge of the first web away from the relevant support carrying the first reel before said

support is moved away from the position of alignment with said second retaining member" used in claim 1 of the first auxiliary request defines a specific sequence of movement of the second retaining member of the claimed device.

In the originally filed application a specific sequence of movement of the second retaining member is mentioned only for the second retaining member in the form of a suction member 75 of the device of the preferred embodiment according to figures 5 to 7, said second suction member being movable via an oscillation of the pair of arms 71 and having cutting means in the form of blade 77 fixed on its top (see page 11, last paragraph to page 12, second paragraph).

The Board cannot follow the argument of the respondent that according to the second paragraph of page 4 of the application as originally filed there is no correlation between the movement of the cutting means and of the second retaining member and therefore the person skilled in the art recognises that the specific sequence of movement of the second retaining element is not limited to the specific cutting means / second retaining member constellation of the device of the specific embodiment according to figures 5 to 7, for the following reasons:

It is true that in the originally filed application different kinds of cutting means and second retaining means are disclosed (see page 4, second paragraph). However, in the application as originally filed there is no clear and unambiguous hint or teaching that the newly claimed specific sequence of movement of the

second retaining member is also imperative for a device having a second retaining member other than a suction member movable via an oscillation of a pair of arms and cutting means other than a blade fixed on the top of the second suction member.

The above mentioned expression added into claim 1 is therefore an undue generalisation of a specific disclosure of the application as originally filed.

Therefore, the subject-matter of claim 1 of the first auxiliary request contravenes the requirements of Article 123(2) EPC and consequently, the first auxiliary request is not allowable.

2. Second auxiliary request

The new expression "control means are provided which control said element carrying said second retaining member to move it to approach said bearing surface such that the trailing end of said first web is retained between said second retaining member and the opposing bearing surface, and to subsequently move the trailing edge of the first web away from the relevant support" used in claim 1 of the second auxiliary request defines a specific sequence of movement of the second retaining member of the claimed device.

The Board concludes for the same reasons as mentioned above with respect to the first auxiliary request that in the application as originally filed there is no clear and unambiguous hint or teaching that the claimed specific sequence of movement of the second retaining member is also imperative for a device having a second

retaining member other than a suction member movable via an oscillation of a pair of arms and cutting means other than a blade fixed on the top of the second suction member.

The above mentioned expression added into claim 1 is therefore an undue generalisation of a specific disclosure of the application as originally filed.

Therefore, the subject-matter of claim 1 of the second auxiliary request contravenes the requirements of Article 123(2) EPC and consequently, the second auxiliary request is not allowable.

3. *Third auxiliary request*

3.1 Amendments

Claim 1 as granted has been amended in that the feature "that said pressing means are arranged downstream of said second retaining member and upstream of the first retaining member with respect to the web feeding direction" has been added in claim 1.

This amendment is derivable from the originally filed patent application for the following reasons:

It is clear from the originally filed description that the "pressing means (81,83; 101,103)" mentioned in the original claim 1 are either a pair of pressure rollers 81,83 or a cylinder/wheel unit 101,103 (see page 12, last five lines to page 13, line 7). Moreover, figures 7 and 8 of the originally filed application clearly show that the two different kinds of pressing

means, ie the pressure rollers 81,83 and the cylinder/wheel unit 101,103 are arranged downstream of the second retaining member 75 and upstream of the first retaining member 69 with respect to the web feeding direction.

Therefore, the above-mentioned added feature is clearly and unambiguously derivable from the original patent application.

This amendment also restricts the scope of protection of the granted claim 1.

The dependent claims and the description have been adapted to the amended claim 1.

Therefore, the amendments do not contravene Article 123(2) and (3) EPC.

3.2 Inventive step

3.2.1 Closest prior art

The Board, following the arguments of the parties, considers document D5 as representing the closest prior art. Document D5, cf. figure 2, discloses a device for the automatic exchange of a first reel 12, on which a first web 14 fed to a rewinding machine is wound, with a second reel 13 on which a second web 50 is wound, the device comprising at least one pair of supports for the said reels, movable in a direction parallel to the axis of the said reels; fixed to each of said supports a respective first retaining member 46,62 for the leading end 63 of said second web 50, each of said first

retaining members being movable with the corresponding support between a lateral waiting position and a position of alignment with a second retaining member 36 for the trailing end of said first web 14, said second retaining member being carried by an element; pressing means 37 to press the trailing end of the said first web against the leading end of the said second web, causing them to be joined together; a cutting means 39 to cut the said first web 14 to form the said trailing end; each one of said first retaining members 46,62 being associated with a bearing surface (the curved front face of the transverse bar 46), said bearing surface being movable integrally with the respective first retaining member 46,62 and being disposed before said first retaining member with respect to the direction of advance of the web being unwound from the corresponding reel; and said pressing means 37 being arranged upstream of the first retaining member 46,62 with respect to the web feeding direction.

The Board cannot accept the argument of the appellant that in document D5 the pressing means 37 is arranged downstream of the second retaining member 36 with respect to the web feeding direction, since in order to be able to clamp the web against the member 36, the movable member 37 has to be at the same height with the fixed member 36 with respect to the web feeding direction (see figure 3 and column 2, lines 35 to 42 of document D5).

3.2.2 Problem underlying the invention

The problem underlying the invention of the patent in suit is to improve the device known from document D5 in order to allow a faster reel exchange and splicing operation.

3.2.3 Solution

In accordance with claim 1 of the third auxiliary request the above-mentioned problem is solved in that the device of document D5 is modified so that the element carrying the second retaining member is movable such as to move the trailing edge of the first web away from the relevant support and such as to approach the bearing surface and by arranging the pressing means downstream of the second retaining member with respect to the web feeding direction.

3.2.4 The above mentioned solution is not rendered obvious by the documents under consideration for the following reasons:

The apparatus of document D8 comprises a reel stand above which there is a beam, pivotally mounted on a guide roller frame of a device for automatically splicing the web material. This beam can pivot downwardly toward the reel core. The splicing device has a severing knife, a web end retaining member and a pressure roller. On a carriage which can move along the beam, there are a pulley roller and a hollow rod anvil opposite the knife. During reel changing the beam swings downwardly to a point close to the reel core and, at the same time, the knife blade moves against

the web entering the hollow of the anvil. The cut end thus formed is held by the retaining member while the beam returns to its starting horizontal position letting the space underneath the guide roller frame free for the changing of the reels.

Thus, the pivotally mounted beam in the device of document D8 solves the problem of freeing the space for the new incoming reel which approaches in a direction transverse to the axis of the reel. This problem does, however, not arise in the device according to document D5, wherein the new incoming reel approaches in a direction parallel to the axis of the reel, so that there is no need to move the retaining member for the web end of the exhausted reel out of the approaching path of the new reel.

Therefore, the person skilled in the art would not look into document D8 to solve a problem which he would not recognise as such in the device of document D5.

Moreover, the construction design of the device of document D5 comprising a movable retaining means 46,62 for the end of the new web and a stationary retaining means 36 for the end of the old web interacting with an opposite movable piston assembly 37 is not readily compatible with the construction design of the device according to document D8 which comprises only one movable retaining member.

In addition to the above, there is no hint in the prior art to arrange the pressing means downstream of the second retaining member with respect to the web feeding direction in the device according to document D5 in

order to solve the problem mentioned above. Such an arrangement of the pressing means would not allow the device of document D5 to carry out the splicing operation according to document D5 demanding the positioning of the pressing means 37 and the second retaining member 36 at the same height with respect to the web feeding direction in order to clamp the web between each other.

3.2.5 For the above-mentioned reasons, the subject-matter of claim 1 of the patent in suit involves an inventive step within the meaning of Article 56 EPC.

3.2.6 Dependent claims 2 to 7 concern particular embodiments of the device claimed in claim 1 of the third auxiliary request which likewise involve an inventive step.

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 the patent in amended form with the following documents:

   claims: 1 to 7 as filed on 20 December 2004 as third auxiliary request,

   description: columns 1 to 3 as filed on 20 December 2004 and columns 4 to 10 as granted,

   figures: 1 to 8 as granted.

The Registrar: The Chairman:

G. Nachtigall A. Burkhart