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D E C I S I O N
of 13 February 1995

Case Number: T 0883/93 - 3.2.4
Application Number: 88201836.9
Publication Number: 0306092
IPC: B65H 19/30, B65H 19/29
Language of the proceedings: EN

Title of invention:

Apparatus for applying adhesive on tubular cores for rolls of web material and for feeding same cores to a web winding machine

Patentee:

Fabio Perini S.p.A.

Opponent:

Paper Converting Machine Company
Jagenberg AG

Headword:

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Relevant legal provisions:

EPC Art. 56, 123(2)

Keyword:

"Amendments - added subject-matter (no)"
"Inventive step (yes)"

Decisions cited:

T 0169/83, T 0017/86

Catchword:

-



Case Number: T 0883/93 - 3.2.4

D E C I S I O N
of the Technical Board of Appeal 3.2.4
of 13 February 1995

Appellant:
(Opponent 01)

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Decision under appeal:

Interlocutory decision of the Opposition Division
of the European Patent Office dispatched on
11 August 1993 concerning maintenance of European
patent No. 0 306 092 in amended form.

Composition of the Board:

Chairman: C. Andries
Members: S. Crane
M. Lewenton

Summary of Facts and Submissions

- I. European patent No. 0 306 092 was granted on 17 July 1991 on the basis of European patent application No. 88 201 836.9.
- II. Oppositions against the granted patent were filed by Opponents 01 and 02. They requested revocation of the patent in its entirety on the grounds that its subject-matter lacked novelty and/or inventive step with respect to the state of the art (Article 100(a) EPC) and that the invention was insufficiently disclosed (Article 100(b) EPC). The latter ground was not substantiated.

Of the state of the art relied upon in the opposition proceedings only that reflected by the following pre-published documents played any significant role in the appeal proceedings:

- (R2) Brochure "VARI-DUR" of Jagenberg AG; August 1986
- (R9) EP-A-0 198 495
- (E6) FR-A-2 193 387.

- III. By its decision given at the oral proceedings on 29 June 1993 and issued in writing on 11 August 1993 the Opposition Division held that the patent was to be maintained in amended form on the basis of Claims 1 to 6 and revised description as submitted at the oral proceedings, and the drawings as granted.

Claim 1 reads as follows:

"An automatic surface rewinder for the manufacturing of paper, comprising: a core feeding means (12, 26) for axially feeding the cores (A1, A2, A3, A4,

A5) on a side of the rewinder into a seat (59, 60) provided in an insertion assembly; adhesive applying means (18) along the axial path of the core, for longitudinally distributing adhesive on the cores while they are conveyed toward the rewinder; a first winding cylinder (64) and a second winding cylinder (66), said winding cylinders defining an interspace through which the paper web is fed, characterized in that said seat (59, 60) is arranged in front of said interspace defined by said two winding cylinders (64, 66) on the side from which the paper web is fed, and that pushing means (62) are provided for pushing said core (A) out of said seat (59, 60) into the interspace between said winding cylinders (64, 66)."

Dependent Claims 2 to 6 relate to preferred embodiments of the automatic surface rewinder according to Claim 1.

IV. An appeal against this decision was filed by Opponents 01 on 11 October 1993 and the appeal fee paid at the same time. The Appellants requested that the contested decision be set aside and the patent revoked in its entirety.

The Statement of Grounds of Appeal was filed on 17 December 1993.

V. Oral proceedings before the Board were held on 13 February 1995.

VI. The submissions of the Appellants in support of their request for revocation of the patent can be summarised as follows:

Claim 1 as accepted by the Opposition Division offended against Article 123(2) EPC in two respects:

- (a) The statement in the claim that adhesive is longitudinally distributed on the cores "while they are conveyed toward the rewinder" was much broader than what was supported by the original disclosure from which it was clear that the adhesive was applied at a particular point in the path of the core.
- (b) The only possible basis for the statement in the claim that the seat is arranged "in front of" the interspace was in Figures 5 and 7 of the drawings. The term "in front of" was however very broad, effectively covering any position on the upstream side of the line joining the axes of the winding cylinders, whereas the Figures showed a particular arrangement where the seat was disposed immediately adjacent the interspace between the winding cylinders. Having regard to decision T 169/83 (OJ EPO 1985, 193) it was accepted that it was in principle possible to take up into claims features disclosed solely in the drawings, that decision however imposed strict limitations on the allowability of this which were not met in the present case.

Document R9 disclosed, with particular reference to Figures 18 and 18A, an automatic surface rewinder of the general type with which the claimed invention was concerned where a core, provided with a line of adhesive, was inserted from the upstream side into the interspace between two winding rollers. The core was picked up from a seat which was in front of the interspace, transferred to an adhesive applying station and then transferred to the interspace. In practice it had been found that this technique of applying the adhesive was deficient. An obvious alternative, and one which had been developed by the Appellants without

knowledge of the claimed invention, was to insert the core axially into the seat with a line of adhesive being applied during this movement, as was known from document R2. This obvious modification of the apparatus disclosed in document R9 fell within the broad scope of Claim 1, so that the claim was bad for lack of inventive step.

VII. Opponents 02 (other party to the proceedings under Article 107 EPC) also requested that the contested decision be set aside and the patent revoked in its entirety.

In support of this request they argued during the oral proceedings substantially as follows:

The closest state of the art for the evaluation of inventive step should be seen as document E6 which, as stated in the patent specification, related to the same basic configuration of surface rewinder as the claimed invention. As disclosed there the cores were not provided with adhesive. The provision of adhesive on the cores in such apparatus was however a measure known per se and if the person skilled in the art wished to modify the apparatus of document E6 in this sense it would be obvious for him, following the well-known teaching of document R2, to insert the core axially into the seat from which it is pushed into the interspace and to apply a line of adhesive as the core is moved axially.

VIII. The Respondents (Proprietors of the patent) requested that the appeal be dismissed and the patent be maintained on the basis of the documents underlying the contested decision (main request) or in the alternative that the patent be maintained on the basis of one of the sets of claims submitted with letter dated 22 April 1994 (subsidiary requests I to VI).

Their arguments in support of the main request can be summarised as follows:

Decision T 169/83 relied upon by the Appellants had to be read in conjunction with T 17/86 (OJ EPO 1989, 297) which concerned the admissibility of taking features isolated from an embodiment into a claim. The criteria set out there were met in the present case.

Both of the alternative attacks on the inventive step of the subject-matter of Claim 1 according to the main request were based on hindsight knowledge of the invention. If the person skilled in the art were to choose for some reason to develop the apparatus of document E6 by providing adhesive on the cores he would find a solution to this problem in DE-A-3 217 628 (document P4) and would not need to look for one in apparatus which operated according to a different principle such as disclosed in document R2. In any case the person skilled in the art had believed that if adhesive were used in rewinders of the type disclosed in document E6 it was necessary for technical reasons to provide annular rings of adhesive. The Respondents had been the first to realise that it was possible even in that type of rewriter to work with a longitudinal line of adhesive on the core. Document R9 contained a complete teaching of how to pick up a core from a seat, apply a line of glue to it, and insert it into the interspace between the winding cylinders. The path of the core was transverse to its axis at all times. There was no suggestion that it could be beneficial to modify the rewriter of document R9 by adopting some of the features of the different type of rewriter disclosed in document R2. Even though the Appellants had claimed to have made such a development themselves this did not mean that such development was obvious in the sense of Article 56 EPC particularly as on the evidence provided

by the Appellants in this respect it was apparent that applying adhesive to the core during axial movement thereof was not the first solution they considered.

Reasons for the Decision

1. The appeal complies with the requirements of Articles 106 to 108 and Rules 1(1) and 64 EPC. It is therefore admissible.

2. *Amendments*

The wording of Claim 1 of the main request has been criticised by the Appellants in two main respects as being in contravention of Article 123(2) EPC.

Firstly, it is argued that the statement that the reference to adhesive being longitudinally distributed on the cores "while they are conveyed toward the reminder" is too broad. However, in the context of the preamble of Claim 1 where it is stated that there are core feeding means for axially feeding the cores into a seat, and adhesive applying means along the axial path of the core, it is apparent that the term "while they are conveyed toward the reminder" can only be understood as meaning that the adhesive is longitudinally distributed on the cores as they are being axially fed towards the rewinder by the core feeding means. This arrangement is clearly disclosed in the original application in the paragraph bridging pages 7 and 8, as well as in Figures 1 and 2.

Secondly, the Appellants contend that the position of the seat with respect to the interspace between the winding cylinders and the arrangement of the pushing

means with respect to the seat are stated in the characterising clause of the claim in a manner which constitutes an inadmissible generalisation of the only relevant original disclosure, which is to be found in Figures 5 and 7. Thus the Appellants are arguing that Claim 1 effectively discloses arrangements, in particular where the seat is anywhere in an undefined area "in front of" the interspace, which were not originally disclosed.

When determining the teaching of a claim it is not appropriate to divorce individual terms used therein from their context or to consider the claim in isolation from the description and drawings. In the present case it is stated in the claim that the seat is arranged **in front of** the interspace **on the side from which** the paper web is fed. The contention of the Appellants that "in front of" merely means "to the side of" would therefore make the former term redundant in the claim so that it is apparent that in addition a more restricted meaning must be intended. This meaning, that the seat is also adjacent the interspace, becomes apparent when account is taken of the limited range of operation of the pushing means as disclosed and of the fact that it is an object of the invention to provide for fast operation of the apparatus, which could not be achieved if the seat were to be displaced any significant distance from the interspace. A comparison with the state of the art mentioned in the original application (US-A-4 327 877, IT-A-963 047 and document E6) as relating to the type of rewinding apparatus with which the invention is concerned, where in all cases the seat is adjacent the interspace, confirms this view. Furthermore, from the statement in the claim that pushing means are provided for pushing the core out of the seat into the interspace it is clear how the pushing means have to be disposed with respect to the seat and interspace, and how they

function. This statement is moreover supported not just by the drawings but by lines 1 to 13, page 10 of the original description. Thus the Board is satisfied that Claim 1, when properly interpreted in the above respects, contains an accurate statement of all those features of the preferred embodiment originally described and shown in the drawings which were necessary to produce the result sought by the original application, so that the criteria set out in both decisions T 169/83 and T 17/86 are met.

All of the remaining features of Claim 1 which do not appear in the originally filed Claim 1 have a clear basis in the original disclosure. Since this has not been in dispute in the appeal proceedings further elucidation is unnecessary. It is likewise not in contention that present Claim 1 contains all the mandatory features of granted Claim 1.

Dependent Claims 2 to 6 of the main request correspond in essence to granted dependent Claims 2 to 6 and originally filed dependent Claims 3 to 7 respectively.

The amendments made to the description do not go beyond those necessary to adapt this to the terms of the amended claims and to evaluate the most relevant state of the art.

There are therefore no objections under Articles 123(2) and (3) EPC to the amended documents according to the main request of the Respondents.

3. *State of the art*

3.1 Document R2 concerns a surface rewinder of the type where the core is supported in the saddle formed between two winding cylinders, the paper web to be rewound being

fed through the interspace between the winding cylinders from the side opposite to that where the core is supported. A transfer mechanism for the cores comprises a clamshell-like seat which is normally disposed to one side of the winding cylinders and which in this position receives a core fed axially into the seat. The core moves past an adhesive applicator as it is axially fed to receive a line of adhesive. When a new core is required the seat, which is disposed on a pivoted carrier mechanism, is moved into position above the saddle and opens to release the core. During this movement of the seat the core is clamped to ensure that the circumferential position of the line of adhesive is maintained as required.

3.2 Document R9 discloses, with particular reference to Figures 18 and 18A, a surface rewinder of the type where the core is inserted into the interspace between two winding cylinders from the same side as the paper web is fed. The core transport means comprises a gripper, in particular a vacuum device, which moves along a hypocycloidal path. At the first cusp a core is picked up from an escapement wheel feed at the end of a hopper, at the second cusp a line of adhesive is applied to the core as it contacts an adhesive applying roller, and at the third cusp the core is released into the interspace.

3.3 The surface rewinders of documents E6 and P4 (which was introduced into the appeal proceedings by the Respondents) are generally similar with regard to their basic scheme of operation. In both cases a core is fed in a direction transverse to its axis to a seat in front of and adjacent the interspace between the winding cylinders on the side thereof from which the paper web is fed. When a new core is required it is pushed by pushing means from the seat into the interspace. According to document E6 the cores, which are not

provided with adhesive, are fed to the seat by gravity from a chute. Initial engagement between the core and the paper web is secured by air jets arranged to act on the paper web in the region of the interspace. As disclosed in document P4 the cores are transferred to the seat by a conveyor belt lift which moves them past adhesive applying rollers arranged to apply complete annular rings of adhesive to the cores.

4. *Novelty*

It is apparent from the above description of the state of the art that none of the prior art documents relied on discloses a surface rewinder having all the features set out in Claim 1 of the main request. Since the novelty of the subject-matter of this claim has not been in dispute in the appeal proceedings it is not necessary to go into this question further.

5. *Inventive step*

In the course of the opposition proceedings Claim 1 of the present main request was drafted in two-part form taking document R2 as the basis for its preamble. Although this was perhaps understandable given the relevance of that document to Claim 1 as granted it is apparent that document R2 represents an unsuitable starting point for the evaluation of inventive step for the present Claim 1 of the main request since the surface rewinder to which it relates is not of the type where the core is inserted into the interspace between the winding cylinders in the same direction as the paper web feed.

The surface rewinder of document R9 (Figures 18 and 18A) is however of that type and since here the core is also provided with a longitudinal line of adhesive as is the

case with the claimed invention it is appropriate, as argued by the Appellants, to take this as the most relevant state of the art.

The Appellants contend that once problems with the adhesive applying arrangement at the second cusp of the hypocycloidal core transport means became apparent in operation it would have been obvious to dispense with this arrangement and instead, in a manner known per se from document R2, to feed the cores axially into a seat at the first cusp of the core transport means, the adhesive being applied as the cores are axially fed. The core transport means would therefore pick up the core from this seat and insert it into the interspace between the winding cylinders in a manner corresponding to that stated in Claim 1. In the opinion of the Board the question of whether that development of the apparatus disclosed in document R9 was obvious, it seems for example to run somewhat counter to the statement in the document (column 17, lines 36 to 40) that it is an advantage that "all motions and actions are continuous, steady and rotary", can be left in abeyance since correspondingly modified apparatus would not in any case fall within the terms of Claim 1. Firstly, the seat at the first cusp of the core transport means is not "in front of" the interspace as this term should be interpreted in the context, see section 2, paragraphs 3 and 4 above, but instead by virtue of the form of the core transport means at a considerable distance therefrom (if Figure 18 is in anyway representative at a distance of about three to four times the diameter of the winding cylinders). Secondly, those core transport means, which physically pick up and carry the cores from the seat to the interspace, cannot be considered as "pushing means" which "push the core out of the seat into the interspace" as required by Claim 1.

The alternative approach to inventive step suggested by Opponents 02 is to take the surface rewinder of document E6 as the starting point since this comprises, corresponding to the claimed invention, a seat in front of and adjacent the interspace between the winding cylinders from which seat the core is pushed by pushing means into the interspace. The technical problem in relationship to this state of the art should therefore be seen in providing means for adapting it for use with cores having adhesive applied thereto. That does not seem to the Board to be a wholly realistic approach since the apparatus of document E6 is specifically designed to operate with cores having no adhesive. Be that as it may it was known from document P4 how adhesive can be applied to the cores in a surface rewinder of the same basic type, i.e. where pushing means push the core into the interspace from a seat in front of and adjacent the interspace. Since a solution to the problem stated by Opponents 02 was available to the person skilled in the art from document P4 it would not be an obvious step for him to adopt the form of adhesive applying means known per se from document R2 which relates to a surface rewinder working on a different principle of operation and in which the core is provided with a longitudinal line of adhesive rather than the annular rings of adhesive which were thought to be essential in the type of rewinder with which he was concerned. In this respect it is to be noted that according to document R2 the core is clamped in the seat and the seat as a whole is moved to deliver the core such that the line of adhesive is in the desired position. Similar control over the position of the line of adhesive is achieved with the core transport means disclosed in document R9. In the surface rewinder claimed however (or as disclosed in documents E6 and P4) the core can rotate as it is pushed from the seat into the interspace so that no such positive control of the

position of a longitudinal line of adhesive can be obtained. Thus the realisation of the Respondents that by appropriate design it was in fact possible to work with a longitudinal line of adhesive in this type of surface rewinder has to be considered as part of the overall inventive concept.

Consequently the Board comes to the conclusion that the subject-matter of Claim 1 according to the main request cannot be derived in an obvious manner from the state of the art and therefore involves an inventive step (Article 56 EPC).

6. Thus Claim 1 according to the main request together with its dependent Claims 2 to 6, the revised description and the drawings as granted provide a suitable basis for maintenance of the patent in amended form.
7. In these circumstances there is no need to consider the auxiliary requests of the Respondents.

Order

For these reasons it is decided that:

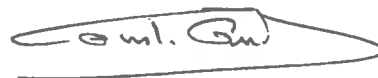
The appeal is dismissed.

The Registrar:



N. Maslin

The Chairman:



C. Andries



