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Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0624/92 - 3.2.3

D E C I S I O N
of 7 March 1995
correcting an error in the decision of the Technical Board of Appeal 3.2.3 of 24 November 1994

Appellant: ANGELO CREMONA & FIGLIO S.p.A.
Viale Lombardia, 275
I-20052 Monza
Milano (IT)

Representative: Martegani, Franco
Ingg. GUZZI e RAVIZZA S.r.l.
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I-20123 Milano (IT)

Decision under appeal: **Decision of the Examining Division of the European Patent Office dated 28 February 1992 refusing European patent application No. 88 200 075.5 pursuant to Article 97(1) EPC.**

Composition of the Board:

Chairman: C. T. Wilson
Members: J. du Pouget de Nadaillac
L. C. Mancini

In application of Rule 89 EPC the decision given on 24 November 1994 is hereby corrected as follows:

On page 7, paragraph 2 of the Order, the words "to maintain the patent" are replaced by "to grant a patent".

The Registrar:

N. Maslin

The Chairman:

C. T. Wilson

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D E C I S I O N
of 24 November 1994

Case Number: T 0624/92 - 3.2.3

Application Number: 88200075.5

Publication Number: 0290056

IPC: F26B 15/10

Language of the proceedings: EN

Title of invention:
Improved opposed belt drier for wood veneers

Applicant:
ANGELO CREMONA & FIGLIO S.p.A.

Opponent:
-

Headword:
-

Relevant legal provisions:
EPC Art. 56

Keyword:
"Inventive step (yes)"

Decisions cited:
-

Catchword:
-

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Summary of Facts and Submissions

I. The appeal is directed against the decision of the Examining Division dated 28 February 1992, which refused the European patent application No. 88 200 075.5 (Publication No. 0 290 056) on the grounds that the subject-matter of Claim 1, as originally filed, although being novel, does not imply an inventive step having regard to the state of the art described in US-A-3 503 140.

The Examining Division took the view that the subject-matter of Claim 1 differs from the dryer described in the US document in that the path of the veneers is generally sinusoidal. Such a feature is merely one of several possibilities the skilled person would select in accordance with the circumstances. The problem solved by this feature is not apparent and the wording of Claim 1 implies that only a part of the dryer has a sinusoidal path.

II. The Appellant (Applicant) filed the appeal on 27 April 1992, the appeal fee being paid on the same day. The Statement of Grounds of Appeal was filed on 1 July 1992.

In response to a communication of the Board, which essentially raised a clarity objection under Article 84 EPC, the Appellant filed with his letter received on 16 June 1994 a set of five claims and new pages 3 and 4 of the description.

III. The independent Claim 1 of this set of claims reads as follows:

"1. Wood veneers drier, of the type in which the veneers are caused to move forward between two overlaid

belts along a path, generally sinusoidal, formed by a plurality of guide rollers around which the said belts partially wind, characterized in that the said guide rollers are disposed along the same generally sinusoidal path followed by the pair of belts, so that the said path comprises a plurality of rectilinear sections connected to each other by very short arcuate sections proximal to the pitch points between the said pair of belts and each guide roller, each loop of the sinusoidal path being formed by a plurality of rollers, said arcuate sections subtending as angle less than 50°."

Dependent Claims 2 to 5 represent preferred embodiments of the dryer according to Claim 1.

IV. The arguments of the Appellant are in substance as follows:

In drying wood veneers, many contradictory requirements have to be overcome, such as a firm pressing of the veneer although its dimension changes and it shrinks, a reasonable size of the dryer necessitating deflection of the belts from a straight path and causing thereby damages to the veneer, right temperatures to be maintained in spite of a considerable long path.... The choice of an appropriate belt path is consequently quite complex and cannot be said to be "merely one of several possibilities".

Moreover, only a small part of the belt path described in the US document has been considered in the contested decision. The dryer disclosed in this prior art document has in fact long horizontal rectilinear sections, each running along the entire length of the dryer and, then, reversing completely its direction by means of a guide

roller. The additional guide rollers, which are mentioned for increasing the ironing effect, cannot be compared to the rollers of the present invention.

Contrary to this state of the art, the present invention abandoned the concept of rectilinear path sections, which require the use of large guide rollers reversing the direction of the path. The belts of the invention are deflected by each **small** roller only for a relatively small angle, so that a veneer is able to shrink in nearly all parts of the sinusoidal path.

V. The Appellant requested the contested decision to be set aside and a patent to be granted with the claims as filed on 20 June 1994.

Reasons for the Decision

1. The appeal is admissible.

2. Claim 1 corresponds to the original Claim 1 with incorporation of the following additional features:

- each loop of the sinusoidal path being formed by a plurality of rollers,
- said arcuate sections subtending an angle less than 50°.

These features can be seen on the original drawings and a mention of the angle 50° appears in the description as originally filed, page 6, line 11. Thus, the requirement of Article 123(2) EPC is fulfilled.

3. *Nearest prior state of art*

3.1 The US document, considered by the contested decision as the prior state of art closest to the present invention, discloses in conjunction with its Figure 3 a dryer with a sinusoidal path of the belts. This sinusoidal path is made of three long rectilinear sections crossing a substantial length of the dryer and disposed one above the other. At each joining end of these rectilinear sections a guide roller of large diameter is located, around which the belts wind, so as to reverse their travelling direction and thereby build up the next rectilinear section. It is moreover disclosed in this prior art that, in order to improve the ironing effect of the belts on the veneers, additional guide rollers can be mounted at both sides of the rectilinear section of the belts, so that these rectilinear sections have a small wavy path.

Neglecting the whole sinusoidal path of the belts, the Examining Division has considered only this last wavy shape of a rectilinear section of the belts and applied it to the wording of Claim 1. This approach of the Examining Division cannot be confirmed. First, according to Article 69 EPC, a claim should be interpreted in the light of the description. Secondly, Claim 1, even with its original wording, mentions **the** path **followed by the belts**, so that the whole path is to be considered. The words "generally sinusoidal" cannot be interpreted in that only a part is sinusoidal. Moreover, the function of the wavy shape and of the additional guide rollers in the prior art, namely to improve the ironing effect, is quite different from, and cannot be compared to, the function of the guide rollers according to the present invention.

In the Board's opinion, the sinusoidal path of the belts according to this US document, in particular with the three rectilinear sections crossing a main part of the dryer length and lying one above the other is based on a concept quite different from the one of the present invention.

3.2 EP-A-0 152 576, mentioned in the description of the present application, represents the closest prior state of art. It describes a veneer dryer in which the belts path along almost the second half of the dryer length is made sinusoidal by guide rollers of large diameter placed one after the other in a horizontal plane, close to each other, the pair of overlaid conveyor belts winding around them. A horizontal zig-zag path of the belts is thereby realized. The belts essentially follow curvilinear sections over a large angle.

4. Since the belts according to this closest prior art have a large contact area with the guide rollers, it is not possible for the veneer to freely shrink. Moreover, the large diameter of the guide rollers creates differences between the speeds of the two belts, which slip relative to each other, causing damages to the veneers. In addition, the adjacent arrangement of the rollers prevents the mounting of nozzles able to blow warm air along the whole path of the belts.

Therefore, the problem underlying the present application is to be seen in improving a dryer of this kind, so as to avoid the above mentioned drawbacks.

5. According to the claimed solution, the diameter of the guide rollers can be small, since very short arcuate sections with an angle less than 50° are provided, and the pressure area of the veneer against the rollers is therefore minimized. The largest part of the width of

the veneer is not located between the two belts looped around the rollers, so that the veneer can shrink. Since a loop is formed by several rollers, rectilinear sections are present between these rollers, allowing the mounting of warm air nozzles in these sections and, therefore, along the whole belts path.

6. A suggestion of such a solution cannot be found in the cited documents.

6.1 As seen above, US-A-3 503 140 teaches to provide long rectilinear sections for the belts and large guide rollers are provided at each end of a rectilinear section in order to reverse the belts path and to form the next rectilinear section. Other cited documents, namely DE-B2-2 414 654 and DE-B2-2 527 433, described similar dryers with rectilinear sections. This first type of dryer, which is based on rectilinear sections which cross a substantial length of a dryer, cannot suggest to modify the dryer according to the closest prior art in the direction of the present invention, since, in this first type of dryer, rollers of large diameter are used in order to reverse the belts direction, when a sinusoidal path is wanted. Each loop is formed by a single roller.

6.2 DE-B-1 266 233 concerns a dryer based on a concept very similar to the one of the above-mentioned closest prior art, since, in this document, a horizontal sinusoidal path of the belts is shown. However, this document, which is older than the closest prior art, still discloses guide rollers of large diameter around which the belts wind over an angle of more than 200°, since the guide rollers are alternatively disposed in two horizontal rows, very close to each other in the

horizontal and vertical directions. Hence, no hint towards the present solution can be found in this prior art.

6.3 It follows that the subject-matter of Claim 1 involves an inventive step. Claims 2 to 5, which relate to preferred embodiments of this subject-matter, are therefore also allowable.

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~~ grant a patent on the basis of the following documents:

Claims 1 to 5, as filed on 16 June 1994.
Description: pages 1, 2 and 5 to 7, as originally filed.
Pages 3 and 4, as filed on 16 June 1994.
Figures 1 and 2, as originally filed.

The Registrar: The Chairman:

N. Maslin C. T. Wilson