

The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

Paper No. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte LEROY H. BUSKER, LARRY CHANCE and JEFFREY H. PULKOWSKI

Appeal No. 1997-4282
Application 08/164,608

ON BRIEF

Before PAK, OWENS, and WALTZ, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the examiner's final rejection of claims 3 and 4, which are all of the claims remaining in the application.

THE INVENTION

Appellants' claimed invention is directed toward a papermaking apparatus comprising a support member having a

doctor blade which is biased against a heated roll. The support member has an interior void which is partially filled with liquid which can evaporate and condense to improve the temperature uniformity along the support member, thereby minimizing distortion of the support member caused by heat transfer from the heated roll. Claim 3 is illustrative:

3. An apparatus for use in papermaking comprising:

a heated roll for supporting and drying a paper web, the roll having a cylindrical surface;

a support member spanning the length of the roll, the support member having portions defining an interior void extending the length of the support member, the void being sealed and defining an interior surface;

a quantity of liquid contained within the void; and

a blade fixedly supported on the support member, wherein the blade substantially spans the length of the roll, and wherein the blade is biased against the roll surface, and wherein the support member remains at a substantially uniform temperature in response to changes in phase of the liquid, which is heated by the roll, and wherein despite non-uniform heating the support member provides uniform support immune to thermal-induced distortion, the arrangement being such that heat radiating from the heated roll surface to the support member causes the liquid disposed on the interior surface adjacent to the heated roll surface to evaporate, thus raising the internal vapor pressure in the interior void of the support structure, the vapor continuously condensing on the interior surface of the support structure not exposed to radiant heating from the heated roll so that the evaporation and condensation of the liquid within the interior void

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maintains relative temperature uniformity along the support member, thereby minimizing thermal distortion caused by heat transfer between the support member and the heated roll.

THE REFERENCES

Carvill	3,001,296	Sep. 26,
1961		
Schraud (DE '620) ¹	29 29 620	Feb. 12,
1981		
(German Offenlegungsschrift)		

THE REJECTION

Claims 3 and 4 stand rejected under 35 U.S.C. § 103 as being unpatentable over Carvill in view of DE '620.

OPINION

We reverse the aforementioned rejection. We need to address only claim 3, which is the sole independent claim.

Carvill discloses an apparatus which differs from that of appellants only in that Carvill's support member interior

¹Citations herein to this reference are to the English translation thereof which is of record.

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void is completely filled with liquid instead of being partially filled such that liquid can evaporate and condense (col. 2, lines 28-33).

DE '620 discloses a web drying roller which is partially filled with liquid such that the liquid evaporates and the vapor is distributed very rapidly and uniformly over the length of the rollers (pages 4-5).

The examiner argues that it would have been obvious to one of ordinary skill in the art to replace Carvill's filled support member interior void with the partially filled interior void of DE '620 to allow uniform temperature and heating throughout the support member, thereby minimizing thermal distortion of the support member (answer, page 5).

DE '620, however, says nothing about thermal distortion. The reference discloses that the support member interior void is partially filled with liquid to solve a particular problem encountered when using heated rollers to dry a web, i.e., a surface temperature at the ends of the heated rollers which is substantially higher than the temperature in the center of the

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rollers, resulting in overdrying of the web at its edges (page 3). The rapid and uniform distribution of the DE '620 vapor along the length of the web causes the temperature along the web to be more uniform (pages 3-4).

Carvill teaches that the object of filling the doctor blade support member interior void is to render the support member extremely resistant to warping upon substantial changes in temperature, and Carvill provides evidence that the warping is

less when the interior void is filled with liquid than when it is unfilled or has cold water circulating through it (col. 1, lines 46-56; col. 2, lines 42-59).

The examiner has not provided evidence or technical reasoning which shows that the references themselves would have led one of ordinary skill in the art to use the DE '620 technique, which is directed toward solving a problem of heated rollers overheating the ends of a web, in the Carvill apparatus, wherein a different technique is used to solve a

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different problem, i.e., distortion of a doctor blade support member. See *In re Rinehart*, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976). The record indicates that the motivation relied upon by the examiner for combining the references so as to produce the claimed invention comes from appellants' disclosure of their invention in the specification rather than coming from the applied prior art. Thus, the record indicates that the examiner used impermissible hindsight in rejecting appellants' claims. See *W.L. Gore & Associates v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984); *In re Rothermel*, 276 F.2d 393, 396, 125 USPQ 328, 331 (CCPA 1960). Consequently, we reverse the examiner's rejection.

DECISION

The rejection of claims 3 and 4 under 35 U.S.C. § 103 over Carvill in view of DE '620 is reversed.

REVERSED

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