

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

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MICHAEL D. MADDEN and MATTHEW T. VOSIKA

Appeal 2006-2824
Application 10/441,513
Technology Center 1700

Decided: September 29, 2006

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

WALTZ, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal from the Primary Examiner's refusal to allow claims 1 through 29, which are the only claims pending in this application, as amended subsequent to the Final Office action (see the amendment dated Sep. 22, 2005, entered as per the Advisory Action dated Oct. 12, 2005). We have jurisdiction pursuant to 35 U.S.C. § 134.

According to Appellants, the invention is directed to an endless belt for a shoe press and a method for forming such a belt, where the process

includes applying multiple overlapping strips from a single nozzle to form a spiral inner layer and an overlying spiral outer layer, with the result that the sagging of the layers can thus be reduced or eliminated (Br. 4-5). Claims 1, 14, and 24 are illustrative of the invention and are reproduced below:

1. A process for forming an endless belt for a press, comprising the steps of:

providing an elongate cylindrical core having a longitudinal axis;

rotating the core about the longitudinal axis;

providing a nozzle movable along a nozzle path that is substantially parallel to and above the core longitudinal axis, the nozzle having at least an upstream outlet and a downstream outlet, the nozzle outlets being longitudinally offset a distance from each other; and

applying multiple strips of a polymeric material to the core through the nozzle outlets as the nozzle moves along the nozzle path such that the downstream strip forms an overlapping spiral inner layer and the upstream strip forms an overlapping spiral outer layer that overlies the inner layer.

14. A process for forming a belt for a press, comprising the steps of:

providing an elongate cylindrical core having a longitudinal axis;

rotating the core about the longitudinal axis;

applying a downstream strip of a polymeric material to the core such that the downstream strip forms an overlapping spiral inner layer; and then

applying an upstream strip of the polymeric material over the inner layer such that the upstream strip forms an overlapping spiral outer layer that overlies the inner layers;

wherein the upstream strip is applied sufficiently proximate in time to the application of the downstream strip that the downstream strip is molten

and bondable to the upstream strip, but sufficiently distant in time that the downstream strip has sufficiently hardened to avoid substantial sagging.

24. An endless belt for use in a shoe press, comprising:
a substantially cylindrical inner layer, the inner layer being formed of a spirally wound, overlapping strip of a first polymeric material; and

a substantially cylindrical outer layer that circumferentially overlies the inner layers, the outer layer being formed of a spirally wound, overlapping strip of the first polymeric material.

The Examiner has relied on the following references as evidence of unpatentability:

Matuschczyk	US 5,118,391	Jun. 02, 1992
Schiel	US 5,134,010	Jul. 28, 1992
Grossmann	DE 44 11 620 A1	Oct. 05, 1995 ¹

Claims 14, 15, 17, and 21-27 stand rejected under 35 U.S.C. § 102(b) as anticipated by Grossmann (Answer 4).² Claims 1-5, 9, 11-13, and 16 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Grossmann (Answer 5). Claims 6-8, 18, 19, 28, and 29 stand rejected under § 103(a) as unpatentable over Grossmann in view of Matuschczyk (Answer 7). Claims 10 and 20 stand rejected under § 103(a) as unpatentable over Grossmann in view of Schiel (Answer 8).

¹ This document is a Federal Republic of Germany *Offenlegungsschrift*. We rely upon and cite from a full English translation of this document, previously made of record (final Office action dated Jul. 22, 2005, page 6).

² We note that the Examiner refers to Grossmann as “Grosmann” throughout the prosecution, and Appellants often repeat this misspelling (e.g., Br. 7). We use the nomenclature “Grossmann” as used in the translation of record.

Based on the totality of the record, we AFFIRM all grounds of rejection in this appeal essentially for the reasons stated in the Answer, as well as those reasons set forth below.

OPINION

A. The Rejection under § 102(b)

The Examiner finds that Grossmann discloses a press jacket for a shoe press apparatus for drainage of water from a paper web, where the jacket comprises an inner layer (20) of elastomer matrix material facing away from the web and containing embedded reinforcement cords (16, 18), and an outer layer (22) adjacent to the web (Answer 4). The Examiner finds that the jacket is made by applying matrix material for the first inner layer (20) to the rotating cylindrical molding body, with the second layer (22) poured on top of the first layer before it hardens (*id.*). The Examiner further finds that Grossmann teaches that the first material is supplied through a first casting nozzle (40) through a first conduit (46) while the cylinder rotates, with the outside layer (22) simultaneously formed through a second casting nozzle (42) arranged a comparatively small distance from the first casting nozzle (40) (Answer 4-5). The Examiner finds that Grossmann teaches that good association is achieved between the layers by casting the second layer onto the first layer before it hardens, and the action of the rotating cylinder and nozzles results in spirally wound, overlapping polymeric materials (Answer 5). The Examiner determines that the method and apparatus described by Grossmann “reads directly on” the claimed subject matter (*id.*).

Appellants argue that it is clear that the inside and outside layers disclosed by Grossmann are formed of different materials, even though each material includes polyurethane, while the claims in this rejection clearly

require the same polymeric material for each layer (Br. 8-9). Appellants further argue that Grossmann is completely silent regarding the performance advantages that are achieved with the claimed subject matter (Br. 9). Finally, Appellants argue that claim 24 also requires the inner layer and outer layer be the same polymeric material (Br. 9).

Appellants' arguments are not persuasive. As correctly found by the Examiner (Answer 8), Grossmann clearly teaches that the inner and outer layers of the belt may be made from the "same" or "identical" polymeric material. See Grossmann, p. 2, last full paragraph, where "the abrasion-resistant layer [the outer layer] is made of the same or similar matrix material as the inner layer and is reinforced by embedded abrasion-resistant particles." See also p. 4, ll. 7-8, where Grossmann teaches "an advantageous refinement of this method, the second matrix material and the first matrix material are identical." As also correctly stated by the Examiner (Answer 8), the language of the claims subject to this rejection does not preclude the additional particles embedded in the outer layer polymeric material.³ Furthermore, Grossmann teaches that, before the hardening of the first layer, a second layer is poured on the first layer to form a long-term bond (p. 4, first full paragraph; see also p. 5, last three lines). Therefore, since this time between layer applications is sufficient to form a good bond, and since "substantial sagging" in claim 14 has not been defined or quantified in the

³ See *Genentech Inc. v. Chiron Corp.*, 112 F.3d 495, 501, 42 USPQ2d 1608, 1613 (Fed. Cir. 1997) ("Comprising" is a term of art used in claim language which means that the named elements are essential, but other elements may be added and still form a construct within the scope of the claims."). We also note that the Examiner refers to Appellants' admitted prior art (Answer 9), where Appellants admit that the prior art teaches multi-layer press belts where each layer consists of the same material and the belt is formed using rotational casting processes.

Specification, we determine that the amount of time between applications of polymeric material by the separate nozzles as taught by Grossmann would have also necessarily achieved the result of avoiding some degree of sagging.

For the foregoing reasons and those stated in the Answer, we determine that the Examiner has established a *prima facie* case of anticipation which has not been adequately rebutted by Appellants' arguments. Therefore we AFFIRM the rejection of claims 14, 15, 17, and 21-27 under § 102(b) over Grossmann.

B. The Rejections over § 103(a)

The Examiner makes the same factual findings as discussed above (Answer 5-6). The Examiner recognizes that claim 1 on appeal requires a single nozzle with two outlets instead of the two separate nozzles taught by Grossmann (Answer 6). However, the Examiner concludes that this difference would have been obvious to one of ordinary skill in this art at the time of the invention since it merely involves integration of two separate nozzles into one device (Answer 6). We agree that, since Grossmann teaches that the outer layer is simultaneously applied over the first inner layer with a second molding nozzle “located at a relatively small distance from the first molding nozzle” (p. 5, last full paragraph), it would have been within the ordinary skill of the art to use one nozzle for both applications, with two outlets positioned a “small distance” apart.

Appellants rely on the same arguments presented above, reiterating that Grossmann “teaches away” from the use of the same material in the inner and outer layers (Br. 10). We adopt our comments from above, as well as the Examiner's remarks in the Answer.

The Examiner applies Matuschczyk and Schiel as secondary references in the rejection of several dependent claims (Answer 7-8). Appellants only argue that these references disclose one belt, and thus do not suggest the dual belt layers formed of the same material as claimed (Br. 10-11). We adopt the Examiner's findings and conclusions of law as set forth in the Answer regarding these secondary references (Answer 7-8). We note that Matuschczyk and Schiel were not applied to show the dual belt system but were applied as evidence of the thicknesses of the two layers (Matuschczyk) and the use of a material to coat the mandrel to promote easy removal of the belt (Schiel).

For the foregoing reasons and those stated in the Answer, we determine that the Examiner has established a prima facie case of obviousness in view of the reference evidence. Based on the totality of the record, including due consideration of Appellants' arguments, we determine that the preponderance of evidence weighs most heavily in favor of obviousness within the meaning of § 103(a). Therefore we AFFIRM all rejections on appeal based on § 103(a).

C. Summary

The rejection of claims 14, 15, 17, and 21-27 under 35 U.S.C. § 102(b) over Grossmann is AFFIRMED.

The rejection of claims 1-5, 9, 11-13, and 16 under 35 U.S.C. § 103(a) over Grossmann is AFFIRMED. The rejection of claims 6-8, 18, 19, 28, and 29 under § 103(a) over Grossmann in view of Matuschczyk is AFFIRMED. The rejection of claims 10 and 20 under § 103(a) over Grossmann in view of Schiel is AFFIRMED.

The decision of the Examiner is AFFIRMED.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

sld

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