

The opinion in support of the decision being entered today
is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte FRANK DRAYTON WILLIAMS and BILL WEI SHIU CHIEN

Appeal 2007-1309
Application 10/873,241
Technology Center 3600

Decided: June 22, 2007

Before MURRIEL E. CRAWFORD, JENNIFER D. BAHR, and LINDA E. HORNER, *Administrative Patent Judges*.

HORNER, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants seek our review under 35 U.S.C. § 134 of the final rejection of claims 10 and 11. We have jurisdiction under 35 U.S.C. § 6(b) (2002).

SUMMARY OF DECISION

We AFFIRM.

THE INVENTION

Appellants' claimed invention is to a self-supporting boot that fits around the profile of a rail of a streetcar track, such that the boot holds itself in position on the rail during placement of the rail, and during pouring and setting of concrete (Specification 1:[0010]). Claim 10, reproduced below, is representative of the subject matter on appeal.

Claim 10. A wrap-round boot for a rail, in combination with the rail, wherein:

- [2] the rail has a rail-profile including a head, a base, and a web connecting therebetween, having the following characteristics:-
 - [3] - the web of the rail has a gauge-side and a field-side;
 - [4] - the head has a rail-head-gauge-underface and a rail-head-field-underface;
 - [5] - the base-flange has a rail-base-gauge-overface, and a rail-base-field-overface;
 - [6] - the rail-head-gauge-underface and the rail-base-gauge-overface are so angled as to define a rail-gauge-wedge-angle therebetween;
 - [7] - the rail-head-field-underface and the rail-base-field-overface are so angled as to define a rail-field-wedge-angle therebetween;
 - [8] the boot has a boot-profile including a gauge-portion, a field-portion, and an under-railportion connecting the gauge-portion and the field-portion, having the following

characteristics;

- [9] - the boot is of flexible elastomeric material, being flexible in that the boot can be wrapped around the rail;
- [10] - the boot-profile lies wrapped around the rail with the under-rail-portion underneath the base of the rail;
- [11] - either (a) the gauge-portion of the boot lies wedged into the rail-gauge-wedge-angle; or (b) the field-portion of the boot lies wedged into the rail-field-wedge-angle; or (c) both;
- [12] a boot-web-portion of the boot comprises a column;
- [13] the configuration of the boot is such that the column is under a vertical compressive stress when the boot lies wedged into the rail;
- [14] the column is so configured that, when the boot is wedged in the rail, the column is of a shape that is between straight and slightly convex, being only so slightly convex that the wedged-in column is stressed in compression, rather than in bending or buckling.

THE REJECTION

The Examiner relies upon the following as evidence of unpatentability:

Ortwein US 5,788,153 Aug. 4, 1998

Claims 10 and 11 stand rejected under 35 U.S.C. § 102(b) as anticipated by Ortwein.

ISSUE

The issue before us is whether Appellants have shown that the Examiner erred in finding Ortwein discloses, either explicitly or inherently, each and every element of the claims. In particular, the issue is whether the Appellants have shown that the Examiner erred in finding Ortwein's elastic layer forms a column which is under a vertical compressive stress when the column lies wedged into the rail.

FINDINGS OF FACT

The relevant facts include the following:

1. Ortwein discloses an infrastructure for railway tracks with continuous elastic support (Ortwein, col. 1, ll. 13-14).
2. With reference to Figure 1, Ortwein discloses an infrastructure having "a rail 1 and a plate 2 made of concrete, whereby the rail 1 is supported via an elastic intermediate layer 3 against the inner lateral limiting surface of a frame formed by two frame halves 4 and 5" (Ortwein, col. 3, ll. 15-18).
3. Ortwein discloses that the frame half 4 "rests against a first lateral wall 6L of a trough 6" and the other frame half 5 "rests against the second lateral wall 6R of the trough, via a wedge 7" (Ortwein, col. 3, ll. 19-21).
4. Ortwein discloses that the elastic layer can be pre-stressed:

The infrastructure of the invention allows a prestressing of the elastic padding provided between the rail and the two frame halves. At first a certain preliminary stress is caused by the setting of the wedge. A further preliminary stress can be caused by using wedges of various width

[sic]. Also inserting foils or thin plates between the wedge and the frame half bordering thereon can produce a further stress. (Ortwein, col. 2, ll. 13-19.)

5. Ortwein does not expressly disclose that the elastic layer undergoes vertical compressive stress when the elastic layer lies wedged into the rail.
6. Figures 1 and 2 of Ortwein show the elastic layer 3 extending completely along the length of the rail between the lower face of the rail head and the upper face of the rail base (i.e., along the rail web) when the elastic layer 3 is disposed against the rail web. As such, Figures 1 and 2 of Ortwein clearly show a snug fit of the elastic intermediate layer 3 against the lower face of the rail head and the upper face of the rail boot.
7. A common definition of elastic is “Easily resuming original shape after being stretched or expanded; flexible.” *The American Heritage® Dictionary of the English Language*, (definition 1a), 4th ed. (2000).
8. The prestressing in Ortwein would necessarily cause the elastic layer 3 to expand at the upper and lower ends as it is squeezed from the sides by the wedge, such that a vertical compressive stress would inherently occur when the column of the elastic layer 3 lies wedged into the rail 1.
9. Ortwein does not disclose that the elastic intermediate layer 3 is made of rubber or a hard rigid material. Ortwein further does not disclose that the elastic intermediate layer 3 is formed by extrusion.

PRINCIPLES OF LAW

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987), *cert. denied*, 484 U.S. 827 (1987).

"It is well settled that a prior art reference may anticipate when the claim limitations not expressly found in that reference are nonetheless inherent in it. Under the principles of inherency, if the prior art necessarily functions in accordance with, or includes, the claimed limitations, it anticipates." *In re Cruciferous Sprout Litig.*, 301 F.3d 1343, 1349, 64 USPQ2d 1202, 1206 (Fed. Cir. 2002) (citations and internal quotation marks omitted). "Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1951 (Fed. Cir. 1999) (citations and internal quotation marks omitted).

Once a *prima facie* case of anticipation has been established, the burden shifts to the Appellant to prove that the prior art product does not necessarily or inherently possess the characteristics of the claimed product. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433-34 (CCPA 1977) ("Where, as here, the claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product."). *See also In re Spada*, 911 F.2d 705,

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708-09, 15 USPQ2d 1655, 1657-58 (Fed. Cir. 1990). "[A] prima facie case of anticipation [may be] based on inherency." *In re King*, 801 F.2d 1324, 1327, 231 USPQ 136, 138-39 (Fed. Cir. 1986).

ANALYSIS

Appellants argue claims 10 and 11 as a group. As such, we select claim 10 as the representative claim, and claim 11 stands or falls with claim 10. 37 C.F.R. § 41.37(c)(1)(vii) (2006). In particular, Appellants argue that Ortwein does not anticipate claim 10 because vertical compression is not induced in the elastic layer 3 as a consequence of the applied horizontal compression, and thus Ortwein does not inherently disclose vertical compression (Appeal Br. 10).

The Examiner found that the prestressing condition caused by setting the wedge in the Ortwein infrastructure, the further preliminary stress caused by using wedges of various widths, and the even further stress caused by adding thin plates, "would certainly produce a squeezing action on the elastic portions of the boot 3 fitted or wedged at both sides of the Ortwein's rail, and thereby results in a horizontal force component as well as a vertical force component as the elastic boot portions being squeezed to fill in the web spaces at the sides of Ortwein's rail" (Answer 3-4). The Examiner thus found Ortwein's boot inherently experienced vertical compressive stress when the column of the boot lies wedged into the rail (Final Office Action 2).

We find that the Examiner set forth a prima facie case of anticipation because Figures 1 and 2 of Ortwein clearly show a snug fit of the elastic

intermediate layer 3 against the lower face of the rail head and the upper face of the rail boot (FF 6), and Ortwein discloses that the layer 3 is “elastic” (FF 1). We understand “elastic” to refer to a flexible material that is capable of expanding or stretching and returning back to its original shape (FF 7). As such, Ortwein discloses that the layer 3 is flexible and capable of expanding. The prestressing in Ortwein would necessarily cause the elastic layer 3 to expand at the upper and lower ends as it squeezed from the sides by the wedge, such that a vertical compressive stress would inherently occur when the column of the elastic layer 3 lies wedged into the rail 1 (FF 7). The burden is thus on Appellants to rebut the Examiner’s *prima facie* case of anticipation.

Appellants presented evidence, in the form of a Declaration of Mr. Gordon Steele (“Steele Decl.”), to rebut the Examiner’s findings. Mr. Steele admits in his Declaration that “in Figs 1, 2 of ORTWEIN, the rubber component 3 is shown as a tight fit with respect to the metal rail 1. That is to say, the situation as shown in the ORTWEIN patent drawings is that the profile of the rubber 3 is a perfect fit into the profile of the rail 1, with no gaps” (Steele Decl. ¶6). Nonetheless, Mr. Steele contends that “such a perfect fit of the two profiles is, as a matter of commercial practice, impossible” (Steele Decl. ¶7) because the elastic layer 3 of Ortwein is a rubber extrusion and “as such is subject to quite loose margins of dimensional tolerance” (Steele Decl. ¶8). Mr. Steele illustrated this contention with two drawings labeled “A” and “B”. Drawing A shows a “tall” column with no gap between Ortwein’s layer 3 and the head and base of rail 1. Drawing B shows a “short” column with gaps on either end of the column of layer 3 and the rail 1.

Appellants admitted that “[t]he tolerance regime [of Drawing] ‘A’ DOES produce vertical compression” and that if we find that Ortwein discloses the “A” tolerance regime, then the rejection of claim 10 can stand (Reply Br. 1) (emphasis in original).

We find no basis in Ortwein’s disclosure for Mr. Steele’s statement that the elastic layer 3 is made of extruded rubber. First, Ortwein describes layer 3 as “elastic”, but never discloses that it is made of rubber (FF 9). Second, Ortwein further does not disclose that the elastic intermediate layer 3 is formed by extrusion (FF 9). As such, we find no basis in fact for Mr. Steele’s conclusion that the dimensional tolerances of Ortwein’s elastic layer 3 are such that a snug fit would not be achieved. We are unwilling to disregard the explicit disclosure in Figures 1 and 2 of Ortwein, which the Declarant admits clearly show a snug fit, with no gaps, between the elastic layer 3 and the head and base of rail 1 (FF 6 and Steele Decl. ¶6), in favor of Mr. Steele’s hypothetical commercial embodiment that is based on his conjecture as to the material and method used to make layer 3.

Mr. Steele further contends that “[a]lthough the components are made of rubber, the elasticity of the rubber compounds used is not that great” and that “the rubber component is hardly less rigid than steel” (Steele Decl. ¶14). As such, he opines that “[t]he profile of the rubber does NOT conform itself to the profile of the steel – at least, not under the industry-typical low levels of the force applied to the rubber, for the purpose of engaging the rubber against the side of the rail” (Steele Decl. ¶14). Again, we find no basis in fact to support Mr. Steele’s contention. Ortwein does not disclose that the elastic intermediate layer 3 is made

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of rubber or a hard rigid material (FF 9). Rather, Ortwein describes the layer 3 as “elastic” (FF 1), which means that the layer 3 is flexible and capable of expansion (FF 7), not hard and rigid. Once again, Mr. Steele and Appellants ask us to ignore the explicit disclosure of Ortwein in favor the Declarant’s conjecture as to a specific type of material used to make the layer 3 of Ortwein. We are averse to do so. As such, we find, after weighing the evidence, that Mr. Steele’s Declaration fails to rebut the Examiner’s *prima facie* case of anticipation.

CONCLUSIONS OF LAW

We conclude that Appellants has failed to show that the Examiner erred in rejecting claims 10 and 11 under 35 U.S.C. § 102(b) as anticipated by Ortwein.

DECISION

The decision of the Examiner to reject claims 10 and 11 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2006).

AFFIRMED

JRG

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