UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte FERMIN MARQUEZ ARZATE and
VICTOR OSORNIO OSORNIO

Appeal 2006-2778
Application 10/780,021
Technology Center 2800

Decided: March 20, 2007

Before KENNETH W. HAIRSTON, LANCE LEONARD BARRY, and ALLEN R. MACDONALD, *Administrative Patent Judges*.

MACDONALD, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants have appealed under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 33-56, the only claims pending in this application. We have jurisdiction over the appeal under 35 U.S.C. § 6(b).

INTRODUCTION

The claims are directed to an overhead or underground telephone lead-in cable for voice, video, and data transmission services. Specifically, moisture is prevented from penetrating the cable by a swelling layer that surrounds the core of the cable. Preventing moisture penetration enables the cable to be installed underground. *See generally* Specification 1:5-16.

Claim 33 is illustrative:

33. An overhead or underground telephone lead-in cable for voice, video and data (VVDL) transmission services, comprising:

a rectangular structure comprising a rectangular outer cover having a geometrical shape comprising a thermoplastic material;

at least one or a plurality of transmission circuit [sic] comprising: a self-supporting member comprising two conducting elements; said elements arranged at the opposite ends, in parallel, and in turn are diametrically opposed to the transmission circuit;

said cable comprising a core having a pair of stranded conductors placed at the center of the rectangular structure of the cable wherein said conductors are insulated by a thermoplastic compound layer; a swelling layer surrounding said core which is deposited electrostatically as a moisture protection element; and an extruded cover reinforced with a thermoplastic material forming the lead-in cable.

The Examiner relies on the following prior art references to show unpatentability:

Asai	US 6,103,317	Aug. 15, 2000
Osornio	US 2002/0003047 A1	Jan. 10, 2002

The rejection[1] presented by the Examiner is as follows:

Claims 33-56 are rejected under 35 U.S.C § 103(a) as unpatentable over Osornio in view of Asai.

Rather than repeat the arguments of Appellants or the Examiner, we refer to the Briefs and the Answer for their respective details. In this decision, we have considered only those arguments actually made by Appellants. Arguments which Appellants could have made but chose not to make in the Briefs have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(vii) (2004).

OPINION

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. *See In re Fine*, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the Examiner must make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966). If that burden is met, the burden then shifts to the Appellants to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. *See In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

The Examiner's rejection essentially finds that Osornio teaches every claimed feature except for (1) an electrostatically-deposited swelling layer

[1] The Examiner withdrew the rejection under 35 U.S.C. § 112, second paragraph (Answer 3).

surrounding the core of the cable (claims 33 and 56), (2) the swelling powder being made of conventional poly (sodium acrylate) (claim 38), and (3) disposing the swelling material between the area around the thin sleeve and the thermoplastic material forming the body of the lead-in core of the stranded conductors (claims 39, 48, and 53). The Examiner cites Asai as teaching these features and concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to coat such a swellable material on the electrical components of Osornio to enhance the cable's water blocking properties (Answer 4-10).

Appellants argue that the prior art does not teach or suggest including a moisture-swellable polymer in Osornio's cable, let alone a specific polysodium acrylate homopolymer selected from the multitude of polymers and various ingredients disclosed in Asai. Appellants emphasize that several factors must be considered to achieve the claimed cable construction including, among other things, (1) the position or arrangement of the layer of the swelling agent coating on the cable; (2) which cable part(s) should be coated; and (3) how and when the cable should be coated (Br. 8-12; Reply Br. 1-8). Appellants also argue that the prior art does not disclose electrostatically applying the water-swellable polymer as claimed (Br. 15).

The Examiner responds that the prior art provides ample motivation to incorporate a waterproofing filler taught by Asai in Osornio's cable because (1) Osornio expressly states a concern with premature aging of the cable due to water intrusion, and (2) Asai teaches a filler component that may be applied to cable components (e.g., wires, rods, tubes, etc.) for water-blocking purposes (Answer 11-12).

We will sustain the Examiner's rejection of independent claim 33. We agree with the Examiner that ample motivation exists on this record to incorporate a swelling layer such as that disclosed by Asai in the cable of Osornio. Asai expressly teaches applying the disclosed water-swellable polymers to cable components (e.g., wires, rods, tubes, strength members, reinforcements, etc.) to block water migration along the cable (Asai, col. 1, ll. 7-11). *See also* Asai, col. 8, ll. 47-60 (noting that the water-swellable compositions can be coated and cured on cable components thereby reducing the space in a cable where water can migrate).

Given this teaching, we see no reason why the skilled artisan would not have incorporated a swelling layer on the cable components in Osornio as claimed, particularly in view of Osornio's stated concern in preventing the deleterious effects of water migration as the Examiner indicates. Merely because Osornio's cover 16 provides some measure of protection against water ingress hardly forecloses using additional waterproofing measures. In our view, adding a water-swellable material to the internal components of Osornio would provide at least an added degree of protection against moisture ingress to the internal cable components.

We further note that the limitation calling for depositing the swelling layer electrostatically is a product-by-process limitation since it merely recites how the structure is formed. It is well settled that reciting how a product is made does not further limit the structure of the product itself. *In re Thorpe*, 777 F.2d 695, 697, 227 USPQ 964, 966 (Fed. Cir. 1985)

(citations omitted).[2] But we also must consider structure implied by the recited process steps, especially where the (1) the product can only be defined by the process steps by which the product is made, or (2) the process steps would be expected to impart distinctive structural characteristics to the final product. *See, e.g., In re Garnero*, 412 F.2d 276, 279, 162 USPQ 221, 223 (CCPA 1969); *see also* MPEP § 2113 (8th ed., rev. 5, Aug. 2006). The burden, however, is on Appellants to provide evidence establishing an unobvious difference between the claimed product and the prior art product. *See In re Marosi*, 710 F.2d 799, 803, 218 USPQ 289, 292-93 (Fed. Cir. 1983).

Although Appellants assert that the cited prior art does not disclose electrostatically depositing the swelling layer, Appellants have provided no evidence on this record to show that (1) the product can only be defined by the process steps by which the product is made, or (2) the process steps would be expected to impart distinctive structural characteristics to the final product.

Turning to the prior art, Asai states that the composition has a suitable thickness such that it can be coated on various cable component materials by a variety of common coating methods (Asai, col. 8, ll. 21-29). Although Asai does not specifically mention electrostatic deposition, we find no

---

[2] *See also SmithKline Beecham Corp. v. Apotex Corp.*, 439 F.3d 1312, 1317, 78 USPQ2d 1097, 1100 (Fed. Cir. 2006) ("Regardless of how broadly or narrowly one construes a product-by-process claim, it is clear that such claims are always to a product, not a process. It has long been established that one cannot avoid anticipation by an earlier product disclosure by claiming the same product more narrowly, that is, by claiming the product as produced by a particular process.").

evidence on this record that suggests a structural distinction between a coated swelling layer disclosed in the prior art and an electrostatically deposited layer as claimed. Absent evidence to the contrary, we conclude that depositing the swelling layer electrostatically in lieu of common coating methods simply does not impart distinctive structural characteristics to the final product.

We also find Appellants' arguments regarding the alleged lack of suggestion to utilize a specific polymer from Asai in the cable of Osornio unavailing. Appellants argue that Asai broadly discloses a swelling layer, polysodium acrylate homopolymer, filler, protective thermoplastic element and various suitable materials, and that it would not have been obvious to "pick and choose" specific materials as claimed from the "multitude" of listed materials (Br. 10, 15-16; Reply Br. 2-8).

Merely because a prior art reference discloses a multitude of effective compositions does not render any particular formulation less obvious. *Merck & Co., Inc. v. Biocraft Labs., Inc.*, 874 F.2d 804, 807, 10 USPQ2d 1843, 1846 (Fed. Cir. 1989) (affirming obviousness of composition selected from among more than 1200 compositions disclosed in patent). In addition, Asai's water-swellable compositions are intended to be applied directly to cable components – a purpose that is commensurate with the claimed invention. *See id.* (noting that the claimed composition was used for the identical purpose taught by the prior art). Also, Asai expressly teaches that the final formulation composition depends on a number of factors including, among other things, the speed and extent of water swelling or blocking response, the nature of the surfaces to which the coating is to be applied, etc. (Asai, col. 4, ll. 11-17). Given these collective teachings, we agree with the

Examiner that selecting a particular swelling layer composition in Asai would have been obvious to the skilled artisan at the time of the invention.

Regarding claims 39, 46, 48, and 53, Appellants have simply not rebutted the Examiner's prima facie case of obviousness for these claims relying on the collective teachings of Osornio and Asai. At the outset, we note that Appellants merely point out what the claims recite (Br. 19; Reply Br. 10).[3] Such statements, however, are not considered arguments for separate patentability of the claims. *See* 37 C.F.R. § 41.37(c)(1)(vii). Nevertheless, we conclude that since Asai teaches coating a variety of cable components, we see no reason why the skilled artisan would not have applied the water-swellable composition taught by Asai to the particular cable components of Osornio as claimed, including applying the composition in the manner recited in claims 39, 46, 48, and 53. Because Appellants have not persuasively rebutted the Examiner's prima facie case of obviousness for claims 39, 46, 48, and 53, the rejection is therefore sustained.

We also conclude that Asai constitutes analogous art. "Two separate tests define the scope of analogous prior art: (1) whether the art is from the same field of endeavor, regardless of the problem addressed, and (2) if the reference is not within the field of the inventor's endeavor, whether the reference still is reasonably pertinent to the particular problem with which

[3] In the Reply Brief, Appellants argue for the first time the specific limitations of claims 54-56 as not disclosed or suggested by Asai (Reply Br. 10). Because Appellants did not raise these specific arguments in the Appeal Brief, however, they are deemed to be waived. *See Optivus Tech., Inc. v. Ion Beam Applications S.A.*, 469 F.3d 978, 989, 80 USPQ2d 1839, 1847-48 (Fed. Cir. 2006).

the inventor is involved." *In re Bigio*, 381 F.3d 1320, 1325, 72 USPQ2d 1209, 1212 (Fed. Cir. 2004).

The field of endeavor of the claimed invention is waterproofed electrical cables. Asai expressly teaches using a water-swellable composition to block water migration along a cable (Asai, col. 1, ll. 7-11). *See also* Asai, col. 13, ll. 17-18 (claiming a method of preparing a water-blocking composite comprising, among other things, applying water-swellable compound to a cable component). But even assuming, without deciding, that Asai is somehow not in the same field of endeavor as the claimed invention, Asai is nevertheless reasonably pertinent to the inventor's problem – namely, reducing or eliminating moisture ingress into an electrical cable. Therefore, the skilled artisan would have reasonably referred to the teachings of Asai when confronted with the problem of reducing or preventing moisture ingress into an electrical cable.

For at least the above reasons, we will sustain the Examiner's rejection of independent claim 33 and dependent claims 39, 46, 48, and 53. Since Appellants have not separately argued the patentability of dependent claims 34-38, 40-45, 47, 49-52, and 54-56 with particularity, these claims fall with independent claim 33. *See In re Nielson*, 816 F.2d 1567, 1572, 2 USPQ2d 1525, 1528 (Fed. Cir. 1987)*; see also* 37 C.F.R. § 41.37(c)(1)(vii).

DECISION

In summary, we have sustained the Examiner's rejection with respect to all claims on appeal. Therefore, the Examiner's decision rejecting claims 33-56 is affirmed.[4]

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) (2004).

AFFIRMED

rwk

Law Office of Carmen Pili Ekstrom
727 Sunshine Dr.
Los Altos, CA 94024

[4] As an ancillary observation, we note that no antecedent basis exists for "the thermal treatment" in claim 51 and "the thin protecting tape material" in claim 53. Also, claim 56 recites a number of redundant limitations that merely repeat limitations recited in independent claim 33. Because the parties did not raise these issues on appeal, they are therefore not before us. In an *ex parte* appeal, "the [B]oard . . . is basically a board of review – we review … rejections made by patent examiners." *Ex parte Gambogi*, 62 USPQ2d 1209, 1211 (Bd. Pat. App. & Int. 2001). Therefore, we leave resolution of these issues to the Examiner and Appellants.