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Banner & Witcoff, LTD. & attorneys for client no 007936 1100 13th Street NW Suite 1200 Washington, DC 20005			ROSARIO-APONTE, ALBA T	
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte MAKOTO KATSUMATA, HIDEOMI ADACHI, and
TAKESHI OGUE

Appeal 2018-006132
Application 14/749,742
Technology Center 3700

Before MICHAEL C. ASTORINO, PHILIP J. HOFFMANN, and
TARA L. HUTCHINGS, *Administrative Patent Judges*.

HUTCHINGS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant¹ appeals under 35 U.S.C. § 134(a) from the Examiner's rejection of claims 1–5, 7, and 9–12. An oral hearing was held on February 6, 2020. We have jurisdiction under 35 U.S.C. § 6(b).

¹ We use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42. Our decision references Appellant's Appeal Brief (“Appeal Br.,” filed Jan. 2, 2018), and the Examiner's Answer (“Ans.,” mailed Mar. 26, 2018) and Final Office Action (“Final Act.,” mailed May 18, 2017). The record includes a transcript of the hearing held February 6, 2020. Appellant identifies Yazaki Corporation as the real party in interest. Appeal Br. 1.

We REVERSE.

CLAIMED INVENTION

Appellant's claimed invention relates to a "line-shaped assembly that includes a heat source which extends straightly, and a tubular-shaped heat source protective member that accommodates and protects the heat source." Spec. 1:12–14.

Claim 1, reproduced below, is the sole independent claim on appeal and is representative of the claimed subject matter:

1. A line-shaped assembly, comprising:
 - a heat source that includes a heat source fluid flowing straightly, and a heat source cover member covering the heat source fluid;
 - a metal member disposed on an outer surface of the heat source cover member; and
 - a tubular-shaped heat source protective member that accommodates and protects the heat source, the metal member being in contact with the heat source protective member so as to draw heat from the heat source fluid;wherein the heat source protective member is made of resin, and includes a first tube body portion formed in a bellows shape having a concave portion and a convex portion, the first tube body portion having an inner surface, that has a first area per unit length in an axial direction of the heat source protective member, in contact with the metal member, and a second tube body portion having an inner surface that has a second area per unit length in contact with the metal member, the second area per unit length being larger than the first area per unit length of the first tube body portion when the first tube body portion and the second tube body portion are in a straight, unbent configuration.

REJECTIONS

Claims 1–3, 7, and 9–12 are rejected under 35 U.S.C. § 102(b) as anticipated by Noone (US 5,469,892, iss. Nov. 28, 1995).

Claims 4 and 5 are rejected under 35 U.S.C. § 103(a) as obvious over Noone and Chikugo (JP 2012-043778 A, pub. Mar. 1, 2012) (machine translation of Abstract).

ANALYSIS

Anticipation

We are persuaded by Appellant’s argument that the Examiner erred in rejecting claim 1 under 35 U.S.C. § 102(b) because Noone does not disclose that the heat source protective member includes a “first tube body portion having . . . a first area per unit length in an axial direction of the heat source protective member” and “a second tube body portion having . . . the second area per unit length being larger than the first area per unit length of the first tube body portion,” as recited in claim 1.

Noone relates to multi-layer tubing having at least one region of corrugation. Noone, col. 1, ll. 19–21. Tubing 10 has a bonding layer 16, outer layer 12, and inner layer 14. *Id.* at col. 4, ll. 56–58. Tubing 10 is composed of an elongated cylindrical wall 18 having an essentially circular cross-section perpendicular to its longitudinal axis 20. *Id.* at col. 10, ll. 41–44. Cylindrical wall 18 has two distinct regions: region 26 where the cylindrical wall 18 is essentially parallel to longitudinal axis 20 and region 28 that has at least one corrugation 30 in cylindrical wall 18. *Id.* at col. 10, ll. 51–57.

The Examiner finds that Noone's outer layer 12 teaches the claimed heat source protective member, region 26 teaches the claimed second tube body portion, region 28 teaches the claimed first tube body portion, and bonding layer 16 constitutes the claimed metal member. *See* Final Act. 3 (citing Noone, Fig. 2); *see also* Ans. 5–8. The difficulty with the Examiner's position, however, is that claim 1 requires the second tube body portion 26 to have a larger area per unit length in contact with the metal member than the area per unit length of the first tube body portion 28. As described above, Noone discloses that tubing 10 comprises an elongated cylindrical wall 18 having an essentially circular cross section perpendicular to its longitudinal axis 20. *See* Noone, col. 10, ll. 41–44. Because claim 1 requires a comparison of area per unit length of each tube body portion in the axial direction of the tube, Noone's second tube body portion 26 must have a larger diameter than Noone's first tube body portion 28 to teach a second tube body having a larger area per unit length. Yet, as pointed out by Appellant, Figure 2 of Noone shows the opposite. *See* Appeal Br. 4–5; *see also* Noone, Fig. 2.

For at least this reason, we reverse the rejection of independent claim 1, and dependent claims 2, 3, 7, and 9–12, under 35 U.S.C. § 102(b) as anticipated by Noone.

Obviousness

The Examiner's rejection under 35 U.S.C. § 103(a) of claims 4 and 5 over Noone and Chikugo does not cure the deficiency in the Examiner's rejection of independent claim 1 under 35 U.S.C. § 102(b) as anticipated by Noone. *See* Final Act. 4–5.

Therefore, we do not sustain the Examiner's rejection of claims 4 and 5 under 35 U.S.C. § 103(a) as unpatentable over Noone and Chikugo, for the same reasons set forth above with respect to the rejection of claim 1.

CONCLUSION

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Affirmed	Reversed
1-3, 7, 9-12	102(b)	Noone		1-3, 7, 9-12
4, 5	103(a)	Noone, Chikugo		4, 5
Overall Outcome				1-5, 7, 9-12

REVERSED