

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 26

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte LESTER L. WAREHIME

Appeal No. 2001-2423
Application 08/931,253

ON BRIEF

Before PAK, OWENS and DELMENDO, *Administrative Patent Judges*.
OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

This appeal is from the final rejection of claims 1 and 3-13, which are all of the claims remaining in the application.

THE INVENTION

The appellant claims a millivoltage generator, i.e., a thermocouple, having as the thermocouple elements a tubular sheath and a rod extending within and spaced apart from the

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interior sidewall of the tubular sheath. Claim 1 is
illustrative:

1. A millivoltage generator comprising a rod of a first metal having side walls extending within and spaced apart from the interior side walls of a tubular sheath of a second metal, said rod having an end face thereof fixed against an inner face of a closed end of said sheath, said rod side walls and said sheath interior side walls having no abutting contact with each other said rod extending beyond an open end of said sheath to a second end thereof, said rod being held in place in said sheath proximate said second end thereof.

THE REFERENCES

Wolff	2,691,056	Oct. 5, 1954
Westbrook et al. (Westbrook)	2,946,835	Jul. 26, 1960
Hajny	3,038,950	Jun. 12, 1962
Holz1	3,343,589	Sep. 26, 1967

THE REJECTIONS

The claims stand rejected as follows: claims 1 and 3-13 under 35 U.S.C. § 112, first paragraph, written description requirement; claims 1, 4, 6 and 7 under 35 U.S.C. § 102(b) as anticipated by Sparrow; claims 1 and 4 under 35 U.S.C. § 102(b) as anticipated by Hajny; claim 3 under 35 U.S.C. § 103 as obvious over Sparrow or Hajny, in view of Westbrook; claim 5 under 35 U.S.C. § 103 as obvious over Sparrow or Hajny, in view of Holz1; claims 8-10 and 12 under 35 U.S.C. § 103 as obvious over Sparrow in view of Hajny; claim 11 under 35 U.S.C. § 103 as obvious over Sparrow in view of Hajny and common knowledge; and

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claim 13 under 35 U.S.C. § 103 as obvious over Sparrow or Hajny, in view of Wolff.

OPINION

We reverse the rejection under 35 U.S.C. § 112, first paragraph, reverse the rejections over Sparrow and over Sparrow combined with additional prior art, and affirm the rejections over Hajny and over Hajny in combination with additional prior art.

The appellant states that the claims stand or fall in two groups, claims 1 and 4-13, and claim 3 (brief, page 4),¹ even though additional references are applied to dependent claims other than claim 3 and, unlike the sole independent claim (1) which is rejected under 35 U.S.C. § 102(b), many of the dependent claims are rejected under 35 U.S.C. § 103. The appellant's only argument regarding claim 3 pertains to a rejection over Holzl in view of Sparrow which is no longer applied by the examiner (brief, pages 10-11).² We therefore consider claim 3 to stand or fall with the claim from which it depends, i.e., claim 1.

¹ The appellant apparently erroneously includes claim 3 in both groups.

² The appellant has provided no argument on appeal directed toward any dependent claim other than claim 3.

Accordingly, we limit our discussion of the affirmed rejections to claim 1. See *In re Burckel*, 592 F.2d 1175, 1178-79, 201 USPQ 67, 70 (CCPA 1979); *In re Herbert*, 461 F.2d 1390, 1391, 174 USPQ 259, 260 (CCPA 1972); 37 CFR § 1.192(c)(7)(1997).

Rejection under 35 U.S.C. § 112, first paragraph

The examiner argues that "an inner face of a closed end of said sheath" in claim 1 lacks adequate written descriptive support in the appellant's originally-filed specification (answer, page 4).³ The examiner argues that the appellant's figure 2 shows what appears to be a cylindrical sheath having two open ends, one of which is sealed by a cap-shaped weld which, as stated in the appellant's specification (page 5, lines 6-7), fixes the rod to the sheath and forms a conductive junction (answer, pages 6-7).

The appellant argues that in the appellant's figure 2 the upper end of the sheath itself is closed and the rod abuts the inner surface of that closed end (supplemental brief, page 9; reply brief, pages 1-2).

The appellant's specification does not support the appellant's interpretation of claim 1. The specification

³ The pages of the examiner's answer have been renumbered sequentially.

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(page 5, lines 6-7) and figure 2 indicate that the weld, or other material which fixes the end of the rod to the end of the sheath, forms a cap which closes the end of the sheath and electrically connects the rod and the sheath. As shown in figure 2, the weld begins at the end of the sheath and extends beyond that end. If the sheath itself had a closed end as argued by the appellant, then the rod, which would be on the inside of the closed end, would be on a side of the closed end opposite the side on which the weld is formed. The specification does not indicate that a weld on one side of a closed end could bond the sheath to a rod on the other side of the closed end.

Hence, we interpret "an inner face of a closed end of said sheath" in claim 1 as referring to the inner face of the weld or other material which closes the end of the sheath. Consequently, we find adequate written descriptive support for that phrase in the appellant's originally-filed specification. Accordingly, we reverse the rejection under 35 U.S.C. § 112, first paragraph.

*Rejections over Sparrow,
alone or with additional prior art*

"Anticipation requires that every limitation of the claim in issue be disclosed, either expressly or under principles of inherency, in a single prior art reference." *Corning Glass Works*

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v. Sumitomo Electric, 868 F.2d 1251, 1255-56, 9 USPQ2d 1962, 1965
(Fed. Cir. 1989).

Sparrow discloses a thermocouple having a rod (17) secured at an end (18) thereof to a closed end (16) of a tube (14) by welding or a similar technique (page 1, right column, lines 3-16). The rod and the tube have dissimilar thermoelectric characteristics such that they form a thermocouple (e.g., the tube is copper and the rod is constantan) (page 1, right column, lines 10-16). The outer end of the rod is welded to a copper rod (20) at a junction (21) so as to form a second thermocouple (page 1, right column, lines 16-19). The copper rod extends beyond an open end of the tube (figure).

The appellant's claim 1, which is the only independent claim, requires that an end face of a rod of a first metal is fixed against an inner face of a closed end of a tubular sheath, and that the other end of this rod is beyond an open end of the tubular sheath. To meet this requirement the examiner relies upon what the examiner calls Sparrow's "rod 17/20" (answer, page 8). Sparrow's rods 17 and 20, however, are separate rods made of different materials such that they form a thermocouple (page 1, right column, lines 14-19). Rod 17 does not extend beyond an open end of the sheath, and rod 20 is not fixed against an inner

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face of a closed end of the sheath. Consequently, neither of these rods meets the above-mentioned requirements of the appellant's claim 1. Accordingly, we reverse the rejection of claims 1, 4, 6 and 7 under 35 U.S.C. § 102(b) over Sparrow.

As for the rejections of dependent claims under 35 U.S.C. § 103, the examiner has not established that Sparrow would have fairly suggested, to one of ordinary skill in the art, the above-discussed requirement of the appellant's independent claim 1 pertaining to the rod, or established that the secondary references remedy this deficiency in Sparrow. Therefore, we reverse the rejection under 35 U.S.C. § 103 over Sparrow in view of the secondary references.

*Rejections over Hajny,
alone or with additional prior art*

Hajny discloses a thermocouple (27) comprised of a tubular outer thermoelement (9) having extending therewithin, in spaced coaxial relation, a rod-like inner thermoelement (10) (col. 2, lines 10-21; figure 1). "The elements **9** and **10** are electrically joined at their outer ends by a welded bead **11** which also seals the outer end of the tubular outer element **9** and forms the hot junction for the thermocouple **27**" (col. 2, lines 21-25). The end of the rod-like inner thermoelement which is not welded to the

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tubular outer thermoelement is held in place in the tubular outer thermoelement by electrical insulation (12) which fills the annular space between the inner and outer thermoelements (col. 2, lines 25-27). The rod-like inner thermoelement extends beyond an open end of the tubular outer thermoelement (figure 1).

Thus, Hajny's thermocouple meets all of the requirements of the appellant's claim 1 and, therefore, anticipates the millivoltage generator claimed in that claim.

The appellant argues that Hajny's weld electrically connects the end of the rod-like inner thermoelement to the end of the tubular outer thermoelement and physically seals the end of the tubular outer thermoelement, whereas the appellant's rod is fixed directly to the tubular sheath without any intervening weld material (supplemental brief, pages 6-7 and 9). We are not persuaded by this argument because, as discussed above regarding the rejection under 35 U.S.C. § 112, first paragraph, we interpret "said rod having an end face thereof fixed against an inner face of a closed end of said sheath" in the appellant's claim 1 as meaning that the end face of the rod is fixed against a weld or other material which closes the end of the sheath.

Accordingly, we affirm the rejection under 35 U.S.C. § 102(b) of claims 1 and 4 over Hajny and the rejections under

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35 U.S.C. § 103 of claims 3, 5 and 13 over Hajny in view of additional prior art.

DECISION

The rejections of claims 1 and 3-13 under 35 U.S.C. § 112, first paragraph, written description requirement, claims 1, 4, 6 and 7 under 35 U.S.C. § 102(b) over Sparrow, claim 3 under 35 U.S.C. § 103 over Sparrow in view of Westbrook, claim 5 under 35 U.S.C. § 103 over Sparrow in view of Holzl, claims 8-10 and 12 under 35 U.S.C. § 103 over Sparrow in view of Hajny, claim 11 under 35 U.S.C. § 103 over Sparrow in view of Hajny and common knowledge, and claim 13 under 35 U.S.C. § 103 over Sparrow in view of Wolff, are reversed. The rejections of claims 1 and 4 under 35 U.S.C. § 102(b) over Hajny, claim 3 under 35 U.S.C. § 103 over Hajny in view of Westbrook, claim 5 under 35 U.S.C. § 103 over Hajny in view of Holzl, and claim 13 under 35 U.S.C. § 103 over Hajny in view of Wolff, are affirmed.

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

AFFIRMED-IN-PART

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CHUNG K. PAK)	
Administrative Patent Judge)	
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TERRY J. OWENS)	
Administrative Patent Judge)	APPEALS AND
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