

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 HUBERT K. YEUNG,
MICHAEL T. POWERS,
AND WESLEY C. WHITELEY

Appeal 2006-2910
Application 10/226,586
Technology Center 2800

Decided: April 18, 2007

Before LANCE LEONARD BARRY, HOWARD B. BLANKENSHIP,
and MAHSHID D. SAADAT, *Administrative Patent Judges*.

SAADAT, *Administrative Patent Judge*.

STATEMENT OF THE CASE

This is a decision on appeal under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1, 4, 8-18, 20-23, 27-36, 38, 39, and 41. Claims 2, 3, 25, and 26 have been canceled and claims 5-7, 19, 24, 37, 40, and 42 have been withdrawn from consideration as being drawn to a non-elected invention. We have jurisdiction under 35 U.S.C. § 6(b).

Appellants' invention relates to an axially adjustable coaxial connector used at RF, microwave and millimeter frequencies wherein the connector includes an integrated launch substrate and/or a hermetically sealed signal interface with a microcircuit package (Specification 3). An understanding of the invention can be derived from a reading of exemplary independent claim 1, which is reproduced as follows:

1. An axially adjustable coaxial connector for a microcircuit package comprising:

a shell having a feed thru portion,

the feed thru portion fitting through a borehole in a package wall of the microcircuit package for installation, the feed thru portion being at least as long as the package wall is thick and comprising a smooth outer surface, such that the feed thru portion is readily slideable within the borehole through the package wall to adjust an axial position of the coaxial connector.

The Examiner relies on the following prior art references:

Czech	US 4,186,358	Jan. 29, 1980
Lindahl	US 4,984,990	Jan. 15, 1991
Nguyen	US 5,508,666	Apr. 16, 1996
Szwec	US 5,563,562	Oct. 8, 1996
Scharen	US 6,154,103	Nov. 28, 2000

The rejections as presented by the Examiner are as follows:

1. Claims 1 and 27 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Szwec.
2. Claims 1, 4, 8-11, 14-16, 20-23, 27, 28, 30-36, and 38 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lindahl and Nguyen.

3. Claims 12, 13, 17, 18, 39, and 41 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Lindahl and Nguyen and further in view of Czech.
4. Claim 29 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Lindahl and Nguyen and further in view of Scharen.

Rather than reiterate the opposing arguments, reference is made to the Briefs and the Answer for the respective positions of Appellants and the Examiner. Only those arguments actually made by Appellants have been considered in this decision. Arguments which Appellants could have made but chose not to make in the Briefs have not been considered (37 C.F.R. § 41.37(c)(1)(vii)).

We affirm.

ISSUES

The issue is whether Applicants have shown that the Examiner erred in rejecting the claims under 35 U.S.C. §§ 102 and 103. In particular, regarding the 35 U.S.C. § 102 rejection over Szwec, Appellants assert that Szwec does not disclose a feed thru portion being at least as long as the package wall is thick such that the feed thru is readily slideable within the borehole through the package wall to adjust the axial position of the connector (Br. 7-9). With respect to the 35 U.S.C. § 103 rejection over the combination of Lindahl and Nguyen, Appellants argue that providing good physical contact, as stated by the Examiner (Answer 4), is not supported by the disclosure of neither references (Br. 13). Appellants further assert that

there is nothing in Nguyen to suggest that the feedthrough section 12 has a length greater than or equal to the housing wall thickness (Br. 13).

1. Therefore, with respect to the rejection of claims over Szwec, the issue turns on whether Szwec discloses a feed through portion that is as long as the package wall is thick or whether the inserted connector is axially adjusted.
2. With respect to the rejection of claims over Lindahl and Nguyen, the main issue is whether the combination of the references properly suggests the claimed invention. Specifically, the issue is:
whether providing good physical contact is suggested by Lindahl and whether Nguyen suggests the feed through section having a length greater than or equal to the housing wall thickness.

FINDINGS OF FACT

Appellants' claim 1 requires the feed thru portion be "at least as long as the the package wall is thick," which includes a length that is merely equal to the package wall.

Szwec discloses a feed thru portion as "termination portion 52" which is depicted in Figure 4 to be as thick as the package wall and shown as panel 72 with a hole 74 (Szwec, col. 3, ll. 6-9). Specifically, the rear end 64 of the termination portion is taught to be flush, but may extend rearward of the panel rear face 75 (Szwec, col. 3, ll. 9-13).

The coaxial connector of Szwec is slid into hole 74 for installing the connector which allows pin portion 32 to be axially adjusted in order to reach and contact a signal-carrying trace 80 on the upper face of circuit board 70 inside the package (Szwec, col. 3, ll. 13-17).

Lindahl discloses (Fig. 1) an axially adjustable coaxial connector P1 which has a feed thru portion 2 fitting through boreholes in the wall of package M (Lindahl, col. 2, ll. 32-49). The connector is depicted (Figs. 2a-2c) to include a cylindrical part 1, a cylindrical flange part 2 and a projecting part 3 (col. 2, ll. 55-61) wherein parts 2 and 3 appear to be fitted through holes in the housing and positioned for connection with the substrate S (col. 3, ll. 29-48).

Nguyen, in a more detailed description of a similar connector, focuses on the specific dimensions of portions 12 and 14 that are fitted through the bore hole in the package wall or extended into the package for connection with substrate 40 (col. 4, ll. 27-36 and ll. 53-55).

PRINCIPLES OF LAW

A rejection for anticipation requires that the four corners of a single prior art document describe every element of the claimed invention, either expressly or inherently, such that a person of ordinary skill in the art could practice the invention without undue experimentation. *See Atlas Powder Co. v. IRECO Inc.*, 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999); *In re Paulsen*, 30 F.3d 1475, 1478-79, 31 USPQ2d 1671, 1673 (Fed. Cir. 1994).

The test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art. *See In re Kahn*, 441 F.3d 977, 987-988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006), *In re Young*, 927 F.2d 588, 591, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991) and *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). Moreover, in evaluating such references it is proper to take into account not

only the specific teachings of the references but also the inferences which one skilled in the art would reasonably be expected to draw therefrom. *In re Preda*, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968).

ANALYSIS

A. *Claim Rejection under 35 U.S.C. § 102*

The termination portion disclosed by Szwec is a feed thru portion of the connector and has a length that is equal to the package wall thickness. Therefore, the Examiner correctly characterizes the feed thru portion of Szwec as “being at least as long as the package wall is thick” (Answer 7-8). We also note that the portion of Szwec (col. 3, ll. 8-12) Appellants rely on to argue that the connector may be shorter than the wall thickness (Br. 8), also teaches that the connector may also “extend rearward of the panel rear face” (col. 3, ll. 12-13). Szwec defines the rearward direction using the arrow R in Figure 2, which points to the direction of the package interior. Therefore, as an alternative configuration, Szwec discloses a connector that is equal or longer than the package wall thickness and is axially adjustable such that the launch end of the connector goes through the package wall and reaches inside the package.

We also note that while Appellants’ Specification may define the claimed term “axially adjusting” as being able to account for tolerance build-up associated with the circuit substrate (Specification 11), the appealed claims are not so limited. Claims will be given their broadest reasonable interpretation consistent with the specification, and limitations appearing in the specification are not to be read into the claims. *In re Etter*, 756 F.2d 852, 858, 225 USPQ 1, 5 (Fed. Cir. 1985). Thus, Appellants’ arguments

(Reply Br. 5) are not persuasive as the specific features argued to be required by the term “axially adjustable” are not recited in the claims.

Therefore, based on the disclosure of Szwec and our findings above, we find that Szwec prima facie anticipates claims 1 and 27. Accordingly, the Examiner did not err in rejecting claims 1 and 27 under 35 U.S.C. § 102 over Szwec.

B. Claim Rejection under 35 U.S.C. § 103

We also disagree with Appellants’ arguments that Lindahl and Nguyen may not be properly combined (Br. 12-15). As stated by the Examiner (Answer 4), the feed thru portion of Lindahl is shown to be as thick as the package wall since the flat connector portion 12 is clearly depicted to have the same length as the package wall thickness. Additionally, Nguyen describes such arrangement and the dimensions associated with the feed thru connector with more specificity and a description of its benefits for connection to the substrate.

Therefore, contrary to Appellants’ assertion (Br. 15) that there is nothing in Lindahl to indicate a need for “good electrical connection” and justify the modification by Nguyen, we observe that the teachings of Nguyen to be merely cumulative since Lindahl shows the claimed feed thru portion as thick as the package wall. Additionally, the details of the feed thru portion, as described by Nguyen, merely provide more precise description for the fitting and uniform impedance (col. 2, ll. 39-49).

The feed thru portion disclosed in Lindahl and Nguyen, as asserted by the Examiner (Answer 9), is shown to have smooth surface for being slideable within the borehole. We are not convinced by Appellant’s arguments (Br. 18) that Lindahl’s and Nguyen’s connectors are not slideable

within the borehole since they are held in a fixed position. In fact, these connectors are axially adjusted by sliding them into the borehole and as argued by the Examiner (Answer 9), the existence of a limit on the extent they are slideable before they reach a fixed position is not precluded by the claims.

Therefore, based on the teachings of Lindahl and Nguyen outlined *supra*, and to the extent claimed, we remain unconvinced by Appellants' assertion that the Examiner erred in rejecting Claims 1, 14, 27, 32, and their dependent claims under § 103(a). We note that Appellants separately challenge the rejection of claims 12, 13, 17, 18, 39, and 41 (Br. 30-33) and of claim 29 (Br. 33-36), but rely on similar arguments discussed above and assert that neither Czech nor Scharen cures the deficiencies of Lindahl and Nguyen. Based on our findings above and the weight of arguments presented by Appellants and the Examiner's, we also find the rejection of the remaining claims over the proposed combination of references to be proper.

CONCLUSION

On the record before us, Appellants have failed to show that the Examiner has erred in rejecting the claims or the rejection is not supported by a legally sufficient basis for holding that the claimed subject would have been obvious within the meaning of § 103(a). In view of our analysis above, we sustain the 35 U.S.C. § 102 rejection of claims 1 and 27 over Szwec and the 35 U.S.C. § 103 rejection of independent claims 1, 14, 27, and 32, as well as their dependent claims 4, 8-11, 15, 16, 20-23, 28, 30, 31, 33-36, and 38 over the combination of Lindahl and Nguyen. We also sustain the 35

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U.S.C. § 103 rejection of claims 12, 13, 17, 18, 39, and 41 over Lindahl, Nguyen, and Czech and of claim 29 over Lindahl, Nguyen, and Scharen.

DECISION

The decision of the Examiner rejecting claims 1 and 27 under 35 U.S.C. § 102 and rejecting claims 1, 4, 8-18, 20-23, 27-36, 38, 39, and 41 under 35 U.S.C. § 103 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)(1)(iv).

AFFIRMED

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