

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. 29

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RUDOLF FUKS, STEPHEN J. TOMA,
GEORGE GEORGHIOU and DONALD P. DURETT

Appeal No. 2003-1704
Application No. 09/604,141

HEARD: January 8, 2004

Before HAIRSTON, RUGGIERO, and DIXON, Administrative Patent Judges.
HAIRSTON, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1 through 16, 18 through 23 and 25 through 29.

The disclosed invention relates to a microwave connector assembly for connection to an electrical device. The microwave connector assembly uses a high flexural strength rigid epoxy resin to bond a terminating flexible microwave coaxial cable to an annular locking member.

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Claim 29 is illustrative of the claimed invention, and it reads as follows:

29. A microwave connector assembly for connection to an electrical device, comprising:

a terminating flexible microwave coaxial cable including an inner conductor, an intermediate dielectric, an outer flexible braided conductor, and an outer insulator adapted to conduct microwave signals of at least 30 GHz;

a coupling nut adapted to connect said microwave flexible cable to the device; and

an annular locking member having an inside surface sized to receive said outer insulator of said coaxial cable therein and bonded by means of a bonding agent to said outer insulator thereof, said annular locking member being coupled to said coupling nut;

wherein said bonding agent is a high flexural strength rigid epoxy resin that eliminates movement between said coaxial cable and said annular locking element and provides antirotational captivation during mating and demating cycles.

The references relied on by the examiner are:

DeHaan et al. (DeHaan)	4,743,327	May 10, 1988
Toma	5,607,325	Mar. 4, 1997
Shimirak et al. (Shimirak)	5,945,634	Aug. 31, 1999

Claims 1 through 12, 14, 16, 18 through 21, 23 and 27 through 29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Toma in view of Shimirak.

Claims 13, 15, 22, 25 and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Toma in view of Shimirak and DeHaan.

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Reference is made to the briefs (paper numbers 20 and 23) and the answer (paper number 21) for the respective positions of the appellants and the examiner.

OPINION

We have carefully considered the entire record before us, and we will reverse the obviousness rejection of claims 1 through 16, 18 through 23 and 25 through 29.

All of the claims on appeal require the use of a "high flexural strength rigid epoxy resin" to bond the coaxial cable to the annular locking member. Appellants and the examiner agree that Toma discloses all of the claimed elements except for the noted bonding agent (brief, page 5; answer, page 4). According to the examiner (answer, pages 4 and 7 through 13), Shimirak discloses (column 8, lines 48 through 51) the use of an epoxy resin to bond or seal a coaxial cable to a connector. Based upon the teachings of Shimirak, the examiner concludes (answer, pages 4 and 5) that:

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to use a bonding agent (e.g. an epoxy resin) instead of friction force to provide a stronger connection. Additionally, it would have been within the skill of a worker in the art at the time the invention was made to elect a specific epoxy resin base[d] on their know[n] characteristics, i.e. an epoxy resin that provides a pull strength in excess of 10 pounds and antirotational captivation up to 90°, to provide that desire[d] bonding of the connector to the outer insulator.

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Appellants argue (brief, page 8) that Shimirak uses an epoxy resin to environmentally seal a coaxial cable 1000 to a cable tap housing 100, and that Shimirak does not disclose the use of a high flexural strength rigid epoxy resin as a bonding agent that eliminates movement between the coaxial cable and the housing. Appellants also argue (brief, page 9; reply brief, page 6) that the examiner has used impermissible hindsight to attribute the characteristics of the epoxy resin disclosed and claimed by appellants to the epoxy resin used by Shimirak.

We agree with appellants' arguments. Appellants specifically disclose (specification, page 11) a particular epoxy resin that will perform the claimed functions of resisting movement and rotation of the coaxial cable with respect to the annular locking member. As indicated supra, Shimirak uses an epoxy resin for environmentally sealing the coaxial cable to the cable tap housing. Nothing in the applied references supports the examiner's conclusion that the skilled artisan would have known to select the particular epoxy resin chosen by appellants to provide the claimed resistance against movement and rotation. The only evidence of record that supports the examiner's contention is the appellants' disclosure, and such evidence is not available to the examiner in an obviousness rejection. Thus, the obviousness rejection of

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claims 1 through 12, 14, 16, 18 through 21, 23 and 27 through 29 is reversed.

The obviousness rejection of claims 13, 15, 22, 25 and 26 is reversed because the teachings of DeHaan do not cure the noted shortcoming in the teachings of Toma and Shimirak.

DECISION

The decision of the examiner rejecting claims 1 through 16, 18 through 23 and 25 through 29 is reversed.

REVERSED

KENNETH W. HAIRSTON)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
JOSEPH F. RUGGIERO)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
)	
)	
JOSEPH L. DIXON)	
Administrative Patent Judge)	

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