UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RUSSELL W. GOWAN, BRIAN RISCH and WAYNE CHEATLE

Appeal 2007-0026
Application 09/814,943
Technology Center 2800

Decided: June 18, 2007

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

BLANKENSHIP, *Administrative Patent Judge*.

DECISION ON APPEAL

This appeal involves claims 1 and 3-6, the only claims pending in this application. We have jurisdiction under 35 U.S.C. §§ 6(b), 134(a).

INTRODUCTION

The claims are directed to a fiber optic cable having a rigid strength member surrounded by a shell of foamed polymer. According to Appellants, rigid strength members in such cables may be jacketed with solid polyethylene to obtain the proper outer diameter of the strength member required for the number and size of buffer tubes, containing optical fibers, to be included in the cable. Solid polyethylene, however, has a coefficient of thermal expansion orders of magnitude higher than that of the central strength member. To avoid low temperature differential contraction, Appellants use jacketing materials having a lower coefficient of thermal expansion, closer to that of materials used for the strength members. (Specification 3: 13 - 4: 21.) Claim 5 is illustrative:

> 5. An upjacketed rigid strength member for fiber optic cable comprising a cylindrical rigid core surrounded by a shell of foamed polymer material, wherein said upjacketed rigid strength member has a cross-sectional diameter that is less than a cross-sectional diameter of an inner surface of said fiber optic cable; and
>
> where the foamed polymer is a member selected from the group consisting of homopolymers, copolymers, terpolymers, or polymer blends, of polypropylene.

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

Kennedy	US 5,210,377	May 11, 1993
Rahman	US 5,390,273	Feb. 16, 1995

The rejection as presented by the Examiner is as follows:

1. Claims 1 and 3-6 are rejected under 35 U.S.C § 103(a) as unpatentable over Rahman and Kennedy.

OPINION

Independent claims 1 and 5 recite a shell of foamed polymer material surrounding a rigid strength member in or for a fiber optic cable. The foamed polymer is a member selected from the group consisting of homopolymers, copolymers, terpolymers, or polymer blends, of polypropylene.

The § 103(a) rejection over Rahman and Kennedy submits (Answer 4-5) that Rahman discloses a foamed polymer material surrounding a rigid strength member 2 surrounded by a jacket 3 of foamed plastic material (col. 3, ll. 56-60). Although Rahman does not "specifically" teach that the jacket is comprised of any of the materials in the Markush group that is claimed, the rejection turns to Kennedy.

Kennedy teaches using foam thermoplastic polymers for providing crush resistance in coaxial electric signal cables. Using low-density porous expanded polytetrafluouroethylene (PTFE) insulation around electrical conductors in the cables improves properties such as signal velocity propagation, dielectric loss, and physical dimensions. However, the material is not inherently crush resistant. Foam thermoplastic polymers may be added to the cables for providing crush resistance. Kennedy col. 1, ll. 6-49. The coaxial cable taught by Kennedy comprises an electrical signal conductor 1 (Fig. 1), surrounded by a layer 2 of porous expanded PTFE (ePTFE). A crush resistant, foamed polymer layer 3 surrounds ePTFE layer 2. Col. 2, l. 35 - col. 3, l. 3. The foamable thermoplastic polymers for layer 3 may include polypropylene. Col. 3, ll. 4-15.

According to the rejection, both references are from the same field of endeavor; the purpose of using a different number of specific foamed polymers such as polypropylene in order to jacket or protect "the cable system" would have been recognized in the pertinent art of Rahman. Further, according to the rejection, it would have been obvious to use a number of different foamed polymers, such as those named in the claims, "for the purpose of protecting the cable system by properties such as flame retardation, low dissipation, low dielectric constants, thermal/insulating properties, and water repelling." (Answer 5.)

"[I]t can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does." *KSR Int'l v. Teleflex Inc*., 127 S.Ct. 1727, 1741, 82 USPQ2d 1385, 1396 (2007). In a rejection on obviousness grounds, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006).

In this case we agree with Appellants to the extent that the Examiner's reasons for why the artisan would have made the proposed combination have absolutely no foundation in the evidence upon which the rejection relies. As a prima facie case for unpatentability has not been set forth on this record, we cannot sustain the rejection of claims 1 and 3-6 under 35 U.S.C § 103(a) as unpatentable over Rahman and Kennedy.

CONCLUSION

In summary, the rejection of claims 1 and 3-6 under 35 U.S.C § 103(a) as unpatentable over Rahman and Kennedy is reversed.

REVERSED

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