

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. 31

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KAZUYA MORIMOTO,
NOBUYOSHI UTSUNO,
and
TOKUDA ISAMU

Appeal No. 2001-0112
Application No. 08/486,494

ON BRIEF

Before STAAB, McQUADE, and NASE, *Administrative Patent Judges*.
STAAB, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal from the examiner's final rejection of claims 1-3, 10-17, 21 and 22. Claims 6-8, the only other claims currently pending, have been allowed.

Appellants' invention pertains to a hollow fishing rod having protrusions affixed to the inner surface thereof to hold the fishing line away from the inner surface of the rod, wherein the protrusions are formed from the inner surface of the fishing

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rod itself, and wherein the protrusions include reinforcing fibers oriented in the circumferential direction. The appealed claims are reproduced in the appendix to appellants' brief.

The references applied in the final rejection are:

Cushman	2,777,239	Jan. 15, 1957
Suzue et al. (Suzue)	5,245,779	Sep. 21, 1993
Tukihara	5,328,742	Jul. 12, 1994

Claims 1-3, 10, 11, 21 and 22 stand rejected under 35 U.S.C. § 102(b), as being anticipated by Tukihara.

Claim 14 stands rejected under 35 U.S.C. § 103 as being unpatentable over Tukihara.

Claims 12, 13, and 17 stand rejected under 35 U.S.C. § 103 as being unpatentable over Tukihara in view of Suzue.

Claims 15 and 16 stand rejected under 35 U.S.C. § 103 as being unpatentable over Tukihara in view of Cushman.

Reference is made to appellants' brief (Paper No. 26) and to the examiner's answer (Paper No. 27) for the respective positions of appellants and the examiner regarding the merits of these rejections.

DISCUSSION

We take up first for consideration the anticipation rejection of claims 1-3, 10, 11, 21 and 22 based on Tukihara. As stated on page 3 of the brief, "[t]he heart of the present

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invention is that reinforcing fibers are included in the protrusive portions of the inner surface of the fishing rod." To this end, independent claim 1 calls for a pass-through fishing rod

having an inner circumferential surface, wherein notched surface portions and protrusive surface portions are formed in said inner circumferential surface of said rod body, and wherein said reinforcing fibers are disposed in said protrusive surface portions in the circumferential direction.

Independent claim 6 is directed to a pass-through fishing rod comprising a rod body having first and second layers,

said rod [body] having an inner circumferential surface, wherein said first layer comprises a narrow prepreg tape containing reinforcing fibers set in the circumferential direction, said tape being placed along the circumferential direction . . . and wherein said second layer comprises prepreg tape made from reinforcing fibers and resin . . . wherein differences in level between said first layer and said second layer form notched surface portions and protrusive surface portions on the inner circumferential surface of the fishing rod.

Independent claim 17 sets forth a pass-through fishing rod comprising a rod body

having an inner circumferential surface wherein a plurality of notched surface portions and protrusive surface portions are formed, wherein said rod body comprises a thermoplastic or thermosetting resin and reinforcing fibers, and wherein said reinforcing fibers are oriented in the circumferential direction within said protrusive surface portions.

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Tukihara, the alleged anticipatory reference, is directed to a rod and method of manufacturing the same. The object of Tukihara is to provide a rod which has appropriate degrees of flexibility and rigidity throughout its length (column 1, lines 48-53). This is achieved

by the feature that a prepreg tape is wound to have adjacent winds partly overlapping each other in a tip end region of the rod, and spaced from each other axially of the rod in a butt end region of the rod.
[Column 1, lines 55-58.]

Tukihara discloses a number of embodiments of the invention for accomplishing the stated objective. These include a Figures 1-3 embodiment (column 2, line 67, through column 3, line 16) wherein first a prepreg sheet 6 having reinforcing fibers oriented axially of the rod and having a width extending over the length of the rod is wound on a mandrel 4, whereafter a prepreg tape 5 having reinforced fibers oriented longitudinally thereof is wound on the mandrel, and wherein the tape is wound such that its winding partly overlap each other at the tip end of the rod and are spaced from each other at the opposite end of the rod. Also disclosed is a Figures 4(a)-4(b) embodiment (column 3, lines 27-31) wherein a prepreg tape 5' is wound on the mandrel prior to prepreg sheet 6, a Figures 5(a)-5(b) embodiment wherein prepreg sheets 6a and 6b having reinforcing fibers laid out on the bias

are utilized, and a Figures 6(a)-6(b) embodiment wherein a plurality of prepreg sheets having fibers oriented respectively in the longitudinal direction and the circumferential direction are employed. Finally, Figure 7 illustrates a "still further embodiment" (column 2, lines 59-60). Although not further described in the specification, it appears that this drawing figure corresponds to the situation described at column 4, lines 9-13, where an additional pattern winding is applied to the butt end region of the rod.

Insofar as we can determine, the examiner has advanced alternate theories of anticipation. The examiner's first theory of anticipation is set forth in the paragraph spanning pages 3 and 4 of the answer and is based on Tukahara's Figure 7 embodiment, wherein a prepreg tape is spirally wound about a mandrel, whereafter a pattern winding 7 having reinforcing fibers running in both axial and circumferential directions is applied thereover at the butt end of the rod. This theory of anticipation appears to be premised on considering the inner surface of the winding layer 7 as corresponding to the claimed inner circumferential surface of the rod. According to the examiner (answer, page 4), the appealed claims would then read on the Figure 7 construction because

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[the] sheet [7] composed of both axially aligned as well as circumferentially aligned carbon fibers is wrapped filling in the spaces between the adjacent convolutions of the spirally wound reinforcing prepreg tape material. This inherently forms a rod body having an inner circumferential surface with protrusive surface portions (between the spaced prepreg wraps [of the spirally wound tape]) and notched surface portions which are filled with circumferentially oriented reinforcing fibers [of the spirally wound tape]

The examiner's position in this regard is based on a strained and unreasonable interpretation of what constitutes the inner surface of the rod of Tukahara. Terms in a claim should be interpreted in a manner consistent with the specification and construed as those skilled in the art would construe them (see *In re Bond*, 910 F.2d 831, 833, 15 USPQ2d 1566, 1567 (Fed. Cir. 1990), *Specialty Composites v. Cabot Corp.*, 845 F.2d 981, 986, 6 USPQ2d 1601, 1604 (Fed. Cir. 1988) and *In re Sneed*, 710 F.2d 1544, 1548, 218 USPQ 385, 388 (Fed. Cir. 1983)). Here, we can think of no circumstance where the artisan, consistent with the appellants' specification, would construe the inner surface of winding layer 7 of Tukahara's Figure 7 embodiment as corresponding to the claimed inner surface of the rod. Accordingly, we cannot support the examiner's first theory of anticipation.

The examiner's alternate theory of anticipation appears to be based on considering the inner surface of the spirally wound prepreg tape layer 5' of Figure 4(a) as corresponding to the claimed inner surface of the rod. The examiner explains:

The inner surface [of the rod] may also be considered to be the inner surface of the [spirally wound] prepreg layer [5'] where adjacent prepreg tape wraps partially overlap their neighbors. This structure would necessarily form a stepped inner surface in which the adjacent tape convolution cannot completely fill and form a perfectly smooth inner surface thereby inherently forming protrusions and notches in the inner surface of this layer. Moreover, this prepreg layer may be the innermost layer of all of the layers . . . of the fishing rod as is clearly set forth in column 3, lines 23-31 [of Tukahara] [Answer, page 6.]

The examiner's alternate theory lacks any reasonable support in Tukahara and is based on speculation and conjecture.

Concerning layer 5', we note column 3, lines 27-31, of Tukahara where it is stated that "prepreg tape **5'** may be wound on the mandrel **4** in advance as shown in FIG. **4(a)** . . . [t]hen, a prepreg tape **5** is wound to form the rod as shown in FIGS. **2** and **3'**" (emphasis added). Based on this description, we consider layer 5' to be an additional layer separate and distinct from the prepreg tape described at column 1, lines 55-58, which prepreg tape is at the heart of Tukahara's invention. Accordingly, it is not clear to what extent tape layers 5 and 5' share the same

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structural characteristic. While it is certainly possible that tape layer 5' (1) might comprise reinforcing fibers oriented axially of the tape such that when wrapped about the mandrel the fibers are disposed in a circumferential direction, and (2) in wrapping said tape layer around the mandrel the turns might overlap adjacent turns, and (3) if adjacent turns overlap, void spaces might result that might create notched surface portions and protrusive surface portions on the inner circumferential surface of the rod as set forth, in one form or another, in each of the independent claims on appeal, it is well settled that inherency may not be established by probabilities and possibilities, but must instead be "the natural result flowing from the operation as taught." See *In re Oelrich*, 666 F.2d 578, 581, 212 USPQ 323, 326 (CCPA 1981). In the present case, the disclosure of Tukahara does not provide an adequate factual basis to establish that the natural result flowing from following the teachings of that reference would be a pass-through fishing rod comprising a rod body having an inner circumferential surface with the characteristics disclosed and claimed by appellants. Accordingly, we also cannot sustain the examiner's alternate theory of anticipation.

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In light of the above, the standing rejection of 1-3, 10, 11, 21 and 22 as being anticipated by Tukiwara is not sustainable.

The Section 103 rejection of claim 14 based on Tukiwara has also been considered. Even if we were to agree with the examiner that the dimensions called for in dependent claim 14 are obvious matters of design choice, the subject matter as a whole of claim 14, which depends from claim 1, would not result for the reasons discussed above. Therefore the rejection of claim 14 also cannot be sustained.

The Suzue reference additionally applied in the Section 103 rejection of 12, 13, and 17, and the Cushman reference additionally applied in the Section 103 rejection of claims 15 and 16 have been considered, but do not make up for the deficiencies of Tukiwara discussed in our treatment of claims 1-3, 10, 11, 21 and 22. Therefore, the Section 103 rejections of these claims likewise cannot be sustained.

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The decision of the examiner is reversed.

REVERSED

LAWRENCE J. STAAB)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
JOHN P. McQUADE)	APPEALS AND
Administrative Patent Judge)	INTERFERENCES
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LJS:hh

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