

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. 25

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HIROYASU SUZUE, KENICHI KAMEDA, HIDEYUKI NAITOU,
TOMOYOSHI TSURUFUJI and NOBUAKI TAKAMATSU

Appeal No. 1999-1061
Application No. 08/568,337

HEARD: November 28, 2000

Before ABRAMS, McQUADE, and LAZARUS, Administrative Patent Judges.
ABRAMS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1-4, 10 and 14-28. Claims 5-9 and 11-13 have been withdrawn from consideration by the examiner as being directed to a non-elected invention. No claims have been allowed.

We REVERSE.

BACKGROUND

The appellants' invention relates to a fishing rod. An understanding of the invention can be derived from a reading of exemplary claims 1 and 10, which appear in the appendix to the appellants' Brief.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Lindler <u>et al.</u> (Lindler)	4,061,806	Dec. 6, 1977
Sunaga <u>et al.</u> (Sunaga)	5,076,004	Dec. 31, 1991
Japanese Published Utility Application ¹ 06-007923		Feb. 1, 1994

Claim 1 stands rejected under 35 U.S.C. § 103 as being unpatentable over Lindler.

Claims 2-4 stand rejected under 35 U.S.C. § 103 as being unpatentable over Lindler in view of the Japanese reference.

Claims 10 and 14-28 stand rejected under 35 U.S.C. § 103 as being unpatentable over Sunaga in view of Lindler.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejections, we make reference to the Answer (Paper No. 20) and the first office action on the merits (Paper No.10) for the examiner's complete reasoning in support of the rejections, and to the Brief (Paper No. 19) for the appellants' arguments thereagainst.

¹Our understanding of this reference was obtained from a PTO translation, a copy of which is enclosed.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, the applied prior art references, the respective positions articulated by the appellants and the examiner, and the guidance provided by our reviewing court. As a consequence of our review, we make the determinations which follow.

All of the rejections are under 35 U.S.C. § 103. The test for obviousness is what the combined teachings of the prior art would have suggested to one of ordinary skill in the art. See, for example, In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). In establishing a prima facie case of obviousness, it is incumbent upon the examiner to provide a reason why one of ordinary skill in the art would have been led to modify a prior art reference or to combine reference teachings to arrive at the claimed invention. See Ex parte Clapp, 227 USPQ 972, 973 (Bd. Pat. App. & Int. 1985). To this end, the requisite motivation must stem from some teaching, suggestion or inference in the prior art as a whole or from the knowledge generally available to one of ordinary skill in the art and not from the appellant's disclosure. See, for example, Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1052, 5 USPQ2d 1434, 1439 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988).

The claimed invention is directed to an improved fishing rod of the type made by layers of wound prepreg. The overall objective of the invention is to provide a strong, lightweight fishing rod. As manifested in independent claim 1, the fishing rod comprises a main layer formed by winding a first prepreg of resin impregnated fibers having a weight percentage of resin 25% or less with the fibers oriented in an axial length direction, and a reinforcement layer formed by winding a second prepreg of resin impregnated fibers with the fibers oriented in a direction crossing the fiber orientation of the main layer, wherein the reinforcement layer is thinner than the main layer and the resin impregnation percentage of the second prepreg is substantially the same as that of the first prepreg. The examiner has rejected this claim on the basis that Lindler shows the claimed fishing rod construction, except that the claim requires a resin impregnation weight percentage of 25% or less whereas Lindler discloses 40%. However, it is the examiner's position that "it would have been obvious to experiment with the weight percent of the resins to change the physical properties of the fishing rod" (Paper No. 10, page 2). We do not agree with this conclusion.

It is axiomatic that the mere fact that the prior art structure could be modified does not make such a modification obvious unless the prior art suggests the desirability of doing so. See, In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). The appellants have found that a resin weight percentage of less than 25% prevents leaning of fibers, resin pools and resin pool layers which results, in combination with the other

features recited in claim 1, in improving the strength of the fishing rod (specification, page 4). While the object of the Lindler invention also is to provide a strong, lightweight fishing rod, the reference discloses that in the construction therein presented the resin volume percentage should be 40%. Lindler does not provide any reasoning as to why this value was selected, nor does it suggest that varying the percentage one way or the other would produce greater or lesser strength. This being the case, Lindler clearly lacks explicit suggestion to one of ordinary skill in the art to reduce the resin weight percentage to 25%, and in our view also is devoid of any implicit suggestion to do so. This being the case, we do not share the examiner's opinion that the artisan nevertheless would have been motivated by Lindler to experiment with the resin weight percentage, much less that this would lead to lowering it to 25%. From our perspective, the only suggestion for modifying the Lindler fishing rod in the manner proposed by the examiner is found in the hindsight afforded one who first viewed the appellants' disclosure. This, of course, does not constitute a proper basis for a rejection on the grounds of obviousness. See In re Fritch, 972 F.2d 1260, 1264, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992).

A prima facie case of obviousness has not been established with regard to the subject matter of claim 1, and we will not sustain the rejection.

Claims 2-4 stand rejected on the basis of Lindler in view of the Japanese reference. Even accepting at face value the examiner's comments regarding the applicability of the teachings of the Japanese reference to these claims, the fact of the matter is that this

reference does not, in our opinion, overcome the deficiency in Lindler discussed above with regard to independent claim 1, from which they depend. This being the case, a prima facie case of obviousness therefore also has not been established with regard to claims 2-4, and this rejection is not sustained.

Independent claim 10 and dependent claims 14-28 have been rejected as being unpatentable over the combined teachings of Sunaga and Lindler. Claim 10 sets forth the inventive fishing rod as a pipe comprising a plurality of layers formed by winding fiber reinforced prepreg such that the fibers are aligned in an axial direction, wherein an inner layer of the plurality of layers has bubbles and wherein bubbles existing in at least one of an outermost layer and a layer interface are fewer than the bubbles in the inner layer. The examiner points out that Sunaga discloses a fishing rod having an inner layer with a plurality of bubbles and an outer layer having no bubbles at all, which meets the “fewer” requirement set forth in claim 10. The examiner also opines that to the extent that Sunaga fails to disclose a pipe formed in the manner recited in claim 10, Lindler teaches orienting the fibers in the outer layer in the axial length direction, and it would have been obvious to so modify Sunaga.

The Sunaga fishing rod comprises an outer tube of prepreg sheet woven of high strength fibers such as glass or carbon impregnated with synthetic resin, that is filled with a thermosetting resin in which a plurality of micro-balloons are dispersed. The application of a thermosetting process causes the woven outer tube to become integral with the resin

filler, which results in high strength. The microballoons can be concentrated in specific areas to lighten portions of the rod, and concentrations of resin produce portions of high strength. See column 2, lines 36-63 and column 3, line 17 et seq. Sunaga does not teach orienting the high strength fibers in any specific direction. It is the examiner's view that one of ordinary skill in the art would have been motivated to orient the fibers in the Sunaga rod to the manner specified in claim 10 "to provide the desired physical properties such as the proper bending of the rod" (Answer, pages 3 and 4). That statement, in our view, is merely an objective, rather than a cogent reason why the artisan would have found suggestion to modify Sunaga. In any event, however, since Sunaga already incorporates a scheme for controlling strength by concentrations of microballoons and resin, we fail to appreciate why one of ordinary skill in the art would have been motivated to modify the Sunaga rod by orienting the woven fibers in a specific direction, much less the axial direction, other than hindsight, especially when considering that Lindler does not utilize woven fibers.

It is our conclusion that the combined teachings of Sunaga and Lindler fail to establish a prima facie case of obviousness with regard to the subject matter recited in claim 10, and we therefore will not sustain the rejection of claim 10 or, it follows, of claims 14-28, which depend therefrom.

SUMMARY

None of the rejections are sustained,
The decision of the examiner is REVERSED.

NEAL E. ABRAMS)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
JOHN P. McQUADE)	APPEALS AND
Administrative Patent Judge)	INTERFERENCES
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RICHARD B. LAZARUS)	
Administrative Patent Judge)	

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APPLICATION NO. 08/568,337

APJ ABRAMS

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APJ McQUADE

DECISION: **REVERSED**

Prepared By:

DRAFT TYPED: 04 Jan 02

FINAL TYPED: