

The opinion in support of the decision being entered today was not written for publication in a law journal and is not binding precedent of the Board.

Paper No. 44

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* A. LANE KEITH, GARY G. MASSENGALE  
JOHN T. RIDDLE and RONALD B. ROTH

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Appeal No. 2003-1337  
Application No. 08/480,411

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ON BRIEF

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Before KIMLIN, OWENS, and PAWLIKOWSKI, *Administrative Patent Judges*.

OWENS, *Administrative Patent Judge*.

*DECISION ON APPEAL*

This appeal is from the final rejection of claims 1-7, 9-13 and 27-37. Claims 8 and 14-26 have been canceled.<sup>1</sup>

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<sup>1</sup> The appellants have requested that claims 21-26 be canceled (response filed July 7, 1997, paper no. 10, page 1) and state that they have been canceled (brief, page 2), but these claims have not been clerically canceled. The examiner should have these claims canceled.

*THE INVENTION*

The appellants' claimed invention is directed toward a microtube which, the appellants state, is useful in a variety of applications including medical catheters (specification, page 1).

Claims 1, 10, 27 and 33 are illustrative:

1. A microtube having a proximal end and a distal end comprising:

an inner cured resin layer;

a braid layer over the inner cured resin layer;

a medial cured resin layer over the braid layer wherein said medial layer extends from the proximal end of the microtube to a point intermediate the proximal end and the distal end at the microtube, encapsulating the braid and comprising a braid matrix layer between the proximal end and said intermediate point;

a third layer over and encasing the medial layer between the proximal end and the intermediate point, said third layer also encapsulating the braid layer and comprising the remainder of the braid matrix layer.

10. A microtube having a tube wall with an outer surface and an inner lumen connecting a proximal end and a distal end, said tube wall comprising at least one cured resin layer and wherein the cross section of the inner lumen at the proximate end is of relatively greater area than the cross section of the inner lumen at the distal end; and wherein the thickness of the tube wall is relatively greater at the proximate end than at the distal end.

27. A microtube having a proximate end and a distal end and comprising:

an inner layer extending from the proximate end of the microtube to a point intermediate the proximate end and the distal end of the microtube; and

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a second layer extending from the proximate end to the distal end of the microtube.

33. A microtube having a proximal end and a distal end and comprising:

a braid layer woven in a weave having relatively fewer picks per inch at the proximal end and relatively more picks per inch at the distal end; and

an outer cured resin layer over and encasing the braid layer, wherein the microtube is relatively stiff at the proximal end in comparison to the distal end.

#### *THE REFERENCES*

Waddell et al. (Waddell)	3,965,909	Jun. 29, 1976
Brooks et al. (Brooks)	4,702,252	Oct. 27, 1987
Pray et al. (Pray)	5,533,987	Jul. 9, 1996
	(effective filing date on or before Apr. 9, 1993)	

#### *THE REJECTIONS*

The claims stand rejected as follows: claim 33 provisionally under the judicially created doctrine of obviousness-type double patenting over the claims of copending application no.

08/331,280; claim 33 under 35 U.S.C. § 102(b) as anticipated by Brooks; claims 1, 3, 27, 28 and 32 under 35 U.S.C. § 102(b) as anticipated by Waddell; and claims 1-7, 9-13 and 27-37 under 35 U.S.C. § 103 as obvious over Waddell in view of Pray.<sup>2</sup>

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<sup>2</sup> A provisional rejection of claims 1-7, 9-13, 27-32 and 34-37 under the judicially created doctrine of obviousness-type double patenting over the claims of copending application no. 08/331,280 is withdrawn in the examiner's answer (page 3).

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OPINION

The appellants do not challenge the obviousness-type double patenting rejection (reply brief, page 15). We therefore summarily affirm this rejection. As for the prior art rejections, we affirm the rejections of claims 27 and 28 and reverse the other rejections.

*Rejection of claim 33 under  
35 U.S.C. § 102(b) over Brooks*

The examiner has the initial burden of establishing a *prima facie* case of anticipation by pointing out where all of the claim limitations appear in a single reference. See *In re Spada*, 911 F.2d 705, 708, 15 USPQ2d 1655, 1657 (Fed. Cir. 1990); *In re King*, 801 F.2d 1324, 1327, 231 USPQ 136, 138-39 (Fed. Cir. 1986).

Brooks discloses a dilation catheter having a braid layer (1)(col. 2, lines 40-43). The catheter has, at or near its distal end, an inflatable portion wherein the braid layer has fewer picks per inch than it has in the remainder of the catheter (col. 2, line 60 - col. 3, line 2).

The examiner argues that "Brooks et al discloses a microtube comprising a braid layer having relatively fewer picks per inch at the proximate end and relatively more picks per inch at the distal end and an outer resin layer. See col. 1, lines 35-62 and col. 2, lines 40-64" (answer, page 4).

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For the examiner's argument to be correct the inflatable portion of Brooks' catheter, which has relatively fewer picks per inch (col. 2, lines 60-66), would have to be at the proximal end. Brooks, however, discloses (col. 1, lines 11-17): "This invention relates to dilation catheters. Such catheters ... comprise a catheter shaft with an inflatable balloon located near the leading end of the catheter when it is inserted into the body of the patient. This end is commonly known as the distal end."<sup>3</sup>

Accordingly, we conclude that the examiner has not carried the burden of establishing a *prima facie* case of anticipation of the microtube claimed in the appellants' claim 33 over Brooks.

*Rejection of claims 1, 3, 27, 28 and 32  
under 35 U.S.C. § 102(b) over Waddell*

The appellants state that claim 28 stands or falls with claim 27 (brief, page 7).<sup>4</sup> We therefore address claim 27 and, with respect to the reversed rejections, the independent claims, i.e., claims 1 and 32.<sup>5</sup>

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<sup>3</sup> Brooks has relatively fewer picks at the distal end to improve inflatability (col. 2, lines 60-66), whereas the appellants have relatively more picks per inch at the distal end to improve flexibility (specification, page 19, lines 1-5).

<sup>4</sup> Citations herein to the brief are to the fifth brief (filed February 7, 2002, paper no. 37).

<sup>5</sup> See *In re Ochiai*, 71 F.3d 1565, 1566 n.2, 37 USPQ2d 1127, 1129 n.2 (Fed. Cir. 1995); 37 CFR § 1.192(c)(7)(1997).

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*Claim 27*

Waddell discloses a catheter microtube having a proximate end (18) and a distal tip (16), comprising a braid layer (24) extending from the proximate end to a point intermediate the proximate end and the distal end (col. 4, lines 26-28; figure 3), and an outer layer which, after pultrusion, extends from the proximate end to the distal end (col. 4, lines 25-30).

Waddell, therefore, anticipates the microtube claimed in the appellants' claim 27.

The appellants argue that Waddell does not disclose an inner layer which terminates at an intermediate point between the proximate end and the distal end (brief, page 16). The appellants are incorrect. As pointed out above, Waddell's braid layer which, as indicated by the appellants' claim 28, can be the appellants' inner layer, terminates at an intermediate point between the proximate end and the distal end (col. 4, lines 26-28; figure 3).

We therefore are not persuaded of reversible error in the examiner's rejection of claim 27 as being anticipated by Waddell. Consequently, we affirm the rejection under 35 U.S.C. § 102(b) over Waddell of this claim and claim 28 which stands or falls therewith.

*Claim 1*

Waddell discloses a multiwall catheter having a proximal end (18) and a distal tip (16) (col. 3, lines 50-51). The catheter is made by 1) covering all but the distal tip of a preformed thermoplastic tube (28) with a nonmetallic braid (24) woven of fiber that previously has been saturated with compatible thermoplastic material, 2) pulling the covered tube through a heated die to form a composite tube in which the braid is embedded into the surface of the thermoplastic tube, 3) covering the composite tube with an outer preformed thermoplastic tube (36) which completely covers the braid but does not extend to the distal tip, and 4) pultruding the covered composite tube through a heated die such that the outer thermoplastic tube lengthens to completely cover and become integral with the inner thermoplastic tube (col. 4, lines 5-43).

The appellants' claim 1 requires that the inner and medial resin layers are cured. Waddell's layers, in contrast, are thermoplastic. For this reason Waddell fails to anticipate the microtube claimed in the appellants' claim 1.

Moreover, the appellants' claim 1 requires that the medial layer is the braid matrix layer between the proximal end and an intermediate point, and that the third layer comprises the remainder of the braid matrix layer. The examiner considers the

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thermoplastic material that saturates Waddell's braid to be the appellants' medial layer (answer, page 6). This thermoplastic material, however, saturates the entire braid layer and, therefore, serves as the matrix layer for the entire braid. Thus, there is no remainder of the braid for which the outer thermoplastic layer can function as the braid matrix layer. For this additional reason Waddell does not anticipate the microtube claimed in the appellants' claim 1.

We therefore reverse the rejection under 35 U.S.C. § 102(b) over Waddell of claim 1 and claim 3 which depend therefrom.

*Claim 32*

Waddell fails to anticipate the microtube claimed in the appellants' claim 32 because this claim requires cured resin layers whereas, as discussed above regarding the rejection of claim 1, Waddell's layers are thermoplastic.

Accordingly, we reverse the rejection of claim 32 under 35 U.S.C. § 102(b) over Waddell.

*Rejection of claims 1-7, 9-13 and 27-37  
under 35 U.S.C. § 103 over Waddell in view of Pray*

*Claims 27 and 28*

As discussed above regarding the rejection under 35 U.S.C. § 102(b), the microtube claimed in the appellants' claim 27 is anticipated by Waddell. For this reason and because anticipation

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is the epitome of obviousness, *see In re Skoner*, 517 F.2d 947, 950, 186 USPQ 80, 83 (CCPA 1975); *In re Pearson*, 494 F.2d 1399, 1402, 181 USPQ 641, 644 (CCPA 1974), we affirm the rejection under 35 U.S.C. § 103 over the combined teachings of Waddell and Pray of claim 27 and claim 28 that stands or falls therewith.<sup>6</sup>

*Claims 2, 7, 9, 12, 33-35 and 37*

Claims 2, 7, 9, 12, 33-35 and 37 require that the braid layer has fewer picks per inch at the proximal end than at the other end. For this feature the examiner relies upon Pray (answer, page 5).

The appellants state that the appellants and the examiner appear to be in agreement that, with respect to the appellants' claims which include a variable pick count limitation, Pray has an effective filing date of April 9, 1993, which is the first filing date of a Pray application containing a disclosure of a braid layer having fewer picks per inch at the proximal end than at the distal end (brief, pages 9-10). The appellants argue that the declaration under 37 CFR § 1.131 (filed July 7, 1997, paper no. 8) overcomes Pray by showing reduction to practice by the appellants before December 1992 of a microtube having a variable pick count (brief, pages 10-12).

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<sup>6</sup> The appellants state that claim 28 stands or falls with claim 27 (brief, page 8).

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The examiner argues that the declaration fails to overcome Pray because to do so the declaration needs to show not just a braid having a variable pick count, but a braid having fewer picks per inch at the proximal end than at the distal end, since this is what is recited in the appellants' claims (answer, page 8).

The examiner's argument is that the declaration must show written descriptive support for the claimed invention under 35 U.S.C. § 112, first paragraph. A showing under 37 CFR § 131, however, does not have to show adequate support for the claimed invention under 35 U.S.C. § 112. See *In re Clarke*, 356 F.2d 987, 991, 148 USPQ 665, 669 (CCPA 1966); *In re Hostettler*, 356 F.2d 562, 565, 148 USPQ 514, 516 (CCPA 1966). All that is required of a Rule 131 declaration is that it must show possession, before the effective date of the reference, of subject matter which at least would have rendered obvious to one of ordinary skill in the art so much of the claimed invention as the reference shows. See *In re Rainer*, 390 F.2d 771, 774, 156 USPQ 334, 336 (CCPA 1968); *Clarke*, 356 F.2d at 992, 148 USPQ at 670; *In re Stempel*, 241 F.2d 755, 759, 113 USPQ 77, 81 (CCPA 1957).

Pray discloses a microtube having a relatively stiffer proximal end and a relatively more flexible distal end, comprising an inner cured resin layer (24), a braid layer (52)

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over the inner cured resin layer, and an outer cured resin layer (54) over and encasing the braid layer, wherein the braid layer is woven in a weave having relatively fewer picks per inch at the proximal end and relatively more picks per inch at the distal end (col. 2, lines 31-34; col. 3, lines 22-30; col. 3, line 66 - col. 4, line 37; col. 10, lines 13-14).

The declaration under 37 CFR § 1.131 shows that, no later than November 1992, the appellants were in possession of a microtube having an inner cured resin layer, a braid layer over the inner cured resin layer, and an outer cured resin layer over and encasing the braid layer, wherein the braid pick count varies over the length of the catheter to provide increased flexibility from the proximal end to the distal end (declaration exhibits B-I).

The declaration exhibits do not show fewer picks per inch at the proximal end than at the distal end. However, given that the pick count varies over the length of the catheter to provide increased flexibility from the proximal end to the distal end, it would have been obvious to one of ordinary skill in the art to vary the pick count as needed to obtain the desired flexibility increase from the proximal end to the distal end.

The declaration under 37 CFR § 1.131, therefore, shows possession of subject matter which at least would have rendered

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obvious to one of ordinary skill in the art so much of the claimed invention as Pray shows. Hence, the declaration has removed Pray as a reference as to the variable pick count limitation of the appellants' claims 2, 7, 9, 12, 33-35 and 37. Accordingly, we reverse the rejection of these claims under 35 U.S.C. § 103 over Waddell in view of Pray.

*Claims 1, 3-6, 29-32 and 36*

The examiner does not rely upon the disclosure by Pray which is unrelated to variable pick count for any teaching which remedies the deficiency in Waddell as to claims 1, 3-6, 29-32 and 36. Also, the examiner has not established that Waddell discloses each limitation of independent claims 1 and 32, as discussed above regarding the rejection under 35 U.S.C. § 102(b), and has not provided any explanation as to how Waddell and Pray would have fairly suggested, to one of ordinary skill in the art, the claim limitations which are not disclosed by Waddell. Hence, we reverse the rejection under 35 U.S.C. § 103 of claim 1, claims 3-6 and 36 which depend directly or indirectly therefrom, and claim 32.

Independent claim 29 and claims 30 and 31 which depend therefrom require that the inner, second and outer layers are cured resin layers. As discussed above regarding the rejection under 35 U.S.C. § 102(b), Waddell's layers are thermoplastic.

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The examiner has not provide any explanation as to how Waddell and Pray would have fairly suggested, to one of ordinary skill in the art, use of cured resin layers in Waddell's catheter.

Claim 29 further requires that both the inner and second layers extend from the proximal end to the distal end, and that the outer layer encases the second layer. Waddell's braid-saturating thermoplastic, which the examiner relies upon as being the appellants' second layer (answer, page 5), does not extend to the distal end of the catheter (col. 4, lines 5-9 and 26-28), and the examiner has not explained how Waddell and Pray would have fairly suggested, to one of ordinary skill in the art, extending Waddell's braid-saturating thermoplastic to the distal end.<sup>7</sup>

We therefore reverse the rejection under 35 U.S.C. § 103 of claim 29 and claims 30 and 31 which depend therefrom.

*Claims 10, 11 and 13*

Claim 10 requires a tube wall which comprises at least one cured resin layer and has an inner lumen, wherein the tube wall thickness and the cross section of the inner lumen are greater at the proximate end than at the distal end.

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<sup>7</sup> The examiner and the appellants should address whether claim 30, which states that the second layer extends only from the proximate end to an intermediate point, is properly dependent from claim 29 which requires that the second layer extends from the proximal end to the distal end.

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The examiner argues that "at col. 3, lines 22-26, Pray et al teaches that [the] inner tube has a greater diameter at the proximate end than at the distal end" (answer, pages 8-9). Pray's inner tube (24A, 24B) referred to by the examiner is not part of the outer wall but, rather, is inside the outer tube (figure 1). The examiner has not pointed out where Pray discloses or would have suggested an outer tube having an inner lumen whose diameter is greater at the proximate end than at the distal end. Also, the examiner has not pointed out where Pray discloses or would have suggested an outer tube wall thickness which is greater at the proximate end than at the distal end. Moreover, the examiner has not explained how Pray would have fairly suggested, to one of ordinary skill in the art, including in Waddell's tube wall at least one cured resin layer.

For the above reasons we reverse the rejection under 35 U.S.C. § 103 of claim 10 and claims 11 and 13 which depend therefrom.

#### *DECISION*

The rejections of claims 27 and 28 under 35 U.S.C. § 102(b) over Waddell and under 35 U.S.C. § 103 over Waddell in view of Pray, and claim 33 provisionally under the judicially created doctrine of obviousness-type double patenting over the claims of copending application no. 08/331,280, are affirmed. The

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rejections of claim 33 under 35 U.S.C. § 102(b) over Brooks,  
claims 1, 3 and 32 under 35 U.S.C. § 102(b) over Waddell, and  
claims 1-7, 9-13 and 29-37 under 35 U.S.C. § 103 over Waddell in  
view of Pray, are reversed.

*AFFIRMED-IN-PART*

EDWARD C.KIMLIN	)	
Administrative Patent Judge	)	
	)	
	)	
	)	
	)	BOARD OF PATENT
TERRY J. OWENS	)	APPEALS
Administrative Patent Judge	)	AND
	)	INTERFERENCES
	)	
	)	
BEVERLY A. PAWLIKOWSKI	)	
Administrative Patent Judge	)	

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