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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* KENNETH D. HARLAN

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Appeal 2019-001567  
Application 15/061,594  
Technology Center 1700

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Before CATHERINE Q. TIMM, JEFFREY B. ROBERTSON, and  
JAMES C. HOUSEL, *Administrative Patent Judges*.

ROBERTSON, *Administrative Patent Judge*.

DECISION ON APPEAL<sup>1</sup>

STATEMENT OF THE CASE

Appellant<sup>2</sup> appeals under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 22–25, 28, and 30. (Appeal Br. 1.) We have jurisdiction pursuant to 35 U.S.C. § 6(b).

We AFFIRM.

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<sup>1</sup>This Decision includes citations to the following documents: Specification filed March 4, 2016 (“Spec.”); Final Office Action mailed April 19, 2018 (“Final Act.”); Appeal Brief filed August 20, 2018 (“Appeal Br.”); Examiner’s Answer mailed October 16, 2018 (“Ans.”); and Reply Brief filed December 14, 2018 (“Reply Br.”).

<sup>2</sup> We use the word “Appellant” to refer to “Applicant” as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as Koninklijke Philips N.V. (Appeal Br. 3.)

## THE INVENTION

Appellant states the invention relates to “improved devices and methods for the delivery of laser energy within a mammalian subject[,] and more specifically, to fiber optic guidewires.” (Spec. ¶ 2.)

Claim 22 is representative and reproduced below from the Claims Appendix to the Appeal Brief:

22. A method of manufacturing a guidewire, comprising:
- providing a hypotube having a proximal end and a distal end and a plurality of apertures disposed in a wall of the hypotube between the proximal end and the distal end;
  - placing two or more optical fibers at least partially within the hypotube; and
  - introducing an adhesive material into the hypotube, and allowing the adhesive material to wick along the optical fibers and into at least one of the plurality of apertures of the wall of the hypotube, such that the adhesive material forms an adhesive plug that fixes the optical fibers relative to the hypotube.

(Appeal Br. (Claims Appendix) 7.)

## REJECTIONS

1. The Examiner rejected claims 22–24, 28, and 30 under pre-AIA 35 U.S.C. § 103(a) as obvious over Hillsman et al. (US 5,643,251, issued July 1, 1997, hereinafter “Hillsman”), O’Connor et al. (US 6,887,235 B2, issued May 3, 2005, hereinafter “O’Connor”), and Jacobsen et al. (US 7,878,984 B2, issued February 1, 2011, hereinafter “Jacobsen”).
2. The Examiner rejected claim 25 under pre-AIA 35 U.S.C. § 103(a) as obvious over Hillsman, O’Connor, Jacobsen, and Powers et al. (US 5,810,789, issued September 22, 1998, hereinafter “Powers”).

(Final Act. 3–5.)

We select independent claim 22 for disposition of this appeal, which is representative of the subject matter claimed, and decide the appeal as to all grounds of rejection on the basis of the arguments presented for this claim (*see* Appeal Br. 6). 37 C.F.R. § 41.37(c)(1)(iv).

*Rejection 1*

ISSUE

The Examiner found Hillsman discloses a method of manufacturing a guide wire for a catheter with a flexible body where the guide wire assembly comprises a hypotube, a glue plug, and an optical fiber bundle. (Final Act. 3.) The Examiner found Hillsman fails to disclose a plurality of apertures disposed in a wall of the hypotube between the proximal end and the distal end, and allowing the adhesive material to wick into at least one of the plurality of apertures. (*Id.*) The Examiner found O'Connor discloses a catheter including a reinforcing tube, such as a hypotube similar to Hillsman, where the hypotube comprises a plurality of apertures extending in a direction between the proximal and distal ends of the heating catheter to provide for variable stiffness to enhance performance of the catheter. (*Id.*) The Examiner determined it would have been obvious to have added a plurality of apertures in the hypotube of Hillsman based on the teachings in O'Connor in order to enhance the guide wire of Hillsman to provide for variable stiffness. (*Id.* at 3–4.) The Examiner relied on Jacobson for support that adhesives placed in the vicinity of apertures in a wall would have wicked into at least one of the plurality of apertures. (*Id.* at 4.)

Appellant argues Hillsman's device includes a coil that provides certain flexibility characteristics to Hillsman's device, whereas O'Connor does not disclose adding a plurality of apertures to a flexible coiled device to provide for variable stiffness to enhance performance. (Appeal Br. 4.) In particular, Appellant contends the Examiner's reasoning is conclusory because neither Hillsman nor O'Connor disclose a need to provide a device with both coils and a plurality of apertures, such that the Examiner's rationale is directed to solving a problem that doesn't exist. (*Id.* at 5.)

Accordingly, the dispositive issue with respect to this rejection is:

Has Appellant identified a reversible error in the Examiner's position that it would have been obvious to have added a plurality of apertures to the hypotube of Hillsman as disclosed in O'Connor?

#### DISCUSSION

We are not persuaded by Appellant's argument that one of ordinary skill in the art would not have had a reason to incorporate a plurality of apertures into the hypotube of Hillsman as disclosed in O'Connor. O'Connor discloses a "reinforcing tube" includes apertures in order "to provide variable stiffness" to a heating catheter shaft. (O'Connor, col. 1, l. 64 – col. 2, l. 4.) O'Connor discloses the reinforcing tube may be a stainless steel hypotube, which is provided with apertures in order to obtain a torqueable and pushable catheter at the proximal end and is soft and flexible at the distal end. (O'Connor, col. 4, l. 59 – col. 5, l. 10, Fig. 1A, describing a reinforcing tube 18 with slits, slots, channels, or grooves 20.) Thus, in contrast to Appellant's argument that the Examiner's rationale is conclusory, O'Connor provides support for the Examiner's position that incorporating

the apertures into Hillsman's hypotube would provide for additional flexibility. (*See* Ans. 4–5.)

In addition, Appellant's arguments rely heavily on the presence of coils in Hillsman in order to contend the proposed modification of Hillsman would be superfluous, because there would be no need to provide a device with coils and a plurality of apertures. (Appeal Br. 4–5.) We are not persuaded by Appellant's position. In this regard, Hillsman discloses coils may be used instead of the polymer jacket at the distal end of the hypotube. (Hillsman, col. 8, ll. 54–61.) Thus, the presence of coils is not required by Hillsman; rather the presence of coils is an alternative embodiment. Indeed, the Examiner's proposed modifications are consistent with Hillsman itself, which provides for different combinations of materials (polymer jacket, coil) in order to adjust the flexibility of the overall guidewire as discussed above. (Hillsman, col. 8, l. 22 – col. 9, l. 10.) Thus, we agree with the Examiner that O'Connor addresses a mechanism for providing variable stiffness to the hypotube, which, even in the presence of coils in Hillsman, would provide additional ability for providing flexibility to the overall guidewire in Hillsman. (Ans. 4–5.)

Accordingly, we affirm the Examiner's rejection of claim 22, and claims 23, 24, 28, and 30 dependent therefrom.

*Rejection 2*

Regarding claim 25, which depends from claim 22, Appellant does not present any additional arguments, but rather relies on the dependency of claim 25 from claim 22 as a basis for patentability. Accordingly, we affirm the Examiner's rejection of claim 25 for similar reasons as discussed above for claim 22.

DECISION

<b>Claims Rejected</b>	<b>Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
22–24 and 28–30	§ 103(a) Hillsman, O’Connor, Jacobsen	22–24 28, and 30	
25	§ 103(a) Hillsman, O’Connor, Jacobsen, Powers	25	
<b>Overall Outcome</b>		22–25, 28, and 30	

FINALITY AND RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED