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EXAMINER

WIBLIN, MATTHEW

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte BRIAN C. GRUBEL

Appeal 2017-002697
Application 13/468,640
Technology Center 3700

Before LYNNE H. BROWNE, JILL D. HILL, and NATHAN A. ENGELS,
Administrative Patent Judges.

BROWNE, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant appeals under 35 U.S.C. § 134 from the rejection of claims 1, 2, 4, 10–13, 15, 21, and 22¹ under 35 U.S.C. § 103(a) as unpatentable over Grandperret (WO 2008/060154 A3, pub. May 14, 2009), Gizara (US

¹ Although, the statement of the rejection includes claims 6–8 and 17–20, these claims were canceled in the Amendment filed July 27, 2015. Accordingly, we understand their inclusion in the statement of this rejection to be a typographical error.

6,956,300 B2, iss. Oct. 18, 2005), and Ricketts (CA 2,622,265, pub. Mar. 29, 2007).² We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

CLAIMED SUBJECT MATTER

The claims are directed to a system and method for converting fluid motion into electrical power. Claim 1, reproduced below with emphasis added, is illustrative of the claimed subject matter:

1. A system for converting fluid motion into electrical power, the system being deployable in a body of fluid and comprising:
 - a support structure including a generator assembly configured to convert mechanical energy to electrical energy and provide electric power from the electrical energy; and
 - a movable structure connected to the support structure and including a canopy coupled to and extending from a base, the canopy including first and second opposing major surfaces joined by first and second opposing minor surfaces, the movable structure being configured to generate mechanical energy for conversion by the generator assembly during a power generation phase of a power cycle in which the fluid motion acts on the movable structure, the movable structure having three or more degrees of freedom,
 - wherein the movable structure has a first configuration during the power generation phase in which the canopy is arranged with the first major surface facing a direction of fluid motion, the first minor surface extending out from the base by the first and second major surfaces, and the second minor surface held against or proximate the base,*
 - wherein the movable structure is reconfigurable from the first configuration to a second, different configuration for a recovery phase of the power cycle in which the movable structure*

² The rejection of claims 1, 2, 4, 10–13, 15, 21, and 22 under 35 U.S.C. § 112, first paragraph for failure to comply with the enablement requirement is withdrawn. Ans. 15.

has a lesser surface area normal to the flow of fluid than the movable structure in the first configuration,

wherein reconfiguration of the movable structure includes the first minor surface being caused by the fluid motion to move in the direction of fluid motion and then downward toward the base, and the second minor surface being caused to move along the base opposite the direction of fluid motion, *until the canopy lies approximately against the base, at which point the movable structure is in the second configuration,*

wherein the body of fluid has a surface generally perpendicular to a first axis and parallel with second and third axes of a Cartesian coordinate system, and in which the fluid motion has one or more of a first-axis component, second-axis component or third-axis component, and

wherein the support structure includes a swivel structure configured to swivel relative to the support structure and thereby permit movement of the movable structure with the second-axis component and third-axis component of the fluid motion, the swivel structure being configured to swivel with the direction of fluid motion and independent of movement of the movable structure away from the support structure.

REFERENCES

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Gizara	US 6,956,300 B2	Oct. 18, 2005
Ricketts	WO 2007/034193 A3 ³	Mar. 29, 2007
Grandperret	WO 2009/060154 A3	May 14, 2009

DISCUSSION

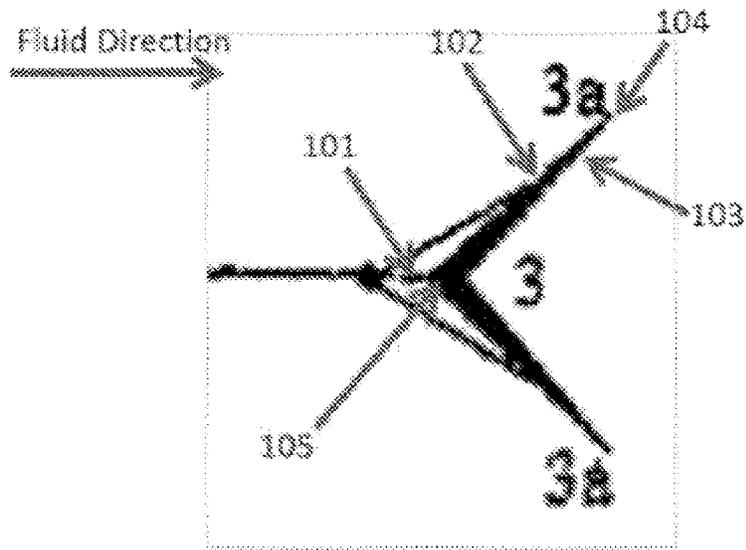
The Examiner finds that Grandperret, Gizara, and Ricketts disclose or suggest all of the limitations of claim 1. *See* Final Act. 6–7, 9–12. In particular, the Examiner finds that “Ricketts discloses (Fig. 1) a system for

³ Equivalent of CA 2622265 A1.

converting fluid motion into electrical power” in which “reconfiguration of the movable structure includes . . . the second minor surface being caused to move along the base opposite the direction of fluid motion, until the canopy lies approximately against the base, at which point the movable structure is in the second configuration.” *Id.* at 11 (citations omitted). Based on that finding, the Examiner reasons that “it would have been obvious to one skilled in the art to substitute one moveable/reconfigurable structure for the other to achieve the predictable result of converting fluid motion into electrical power.” Final Act. 12.

Appellant contends that “Ricketts’ movable structure is not reconfigurable from a first configuration to a second configuration” as set forth in claim 1. Appeal Br. 9. In support of this contention, Appellant explains that “the second minor surface (105) of Ricketts’ movable structure (2) does not move along the base (101) opposite the direction of fluid motion until the canopy (2a) lies approximately against the base.” *Id.* (emphasis omitted).

Responding to this argument, the Examiner construes the claim term “against” to mean “beside, near, or before” and concludes that Ricketts’ “canopy is approximately beside the base.” Ans. 16 (citing *Dictionary.com*). The Examiner further identifies the configuration in an annotated redacted version of Ricketts’ Fig. 1 as corresponding to the claimed second configuration. *See id.* This Figure is reproduced below:



Annotated Fig. 1

The Examiner's Annotated Figure 1 is an annotated and redacted version of Ricketts Figure 1A illustrating the kite portion of this Figure.

The Specification describes the claimed first and second configurations in detail on pages 9–10. The Specification identifies Appellant's Figure 6e, reproduced *infra*, as illustrating the second configuration wherein the canopy lies approximately *against* the base. See Spec. 10:9.

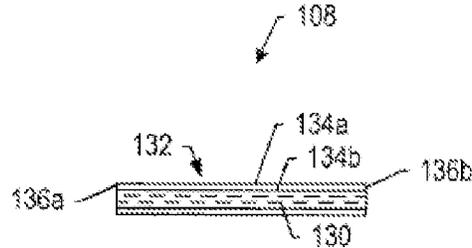


FIG. 6e

Figure 6e is a top view of the movable structure during one stage of a power cycle. Spec. 4.

In construing claim terms, we apply “the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in [Appellant’s] specification.” *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997). Here, Appellant’s Figures 6a–6e inform us as to the breadth of the claim term “against” by specifically identifying Figure 6e as illustrating the second configuration where the canopy lies approximately against the base. This configuration is very different from, for example, the configuration shown in Appellant’s Figures 6c and 6d reproduced below, which depict the canopy as it “moves downward toward the base” (Spec. 10), not as it lies *against* the base:

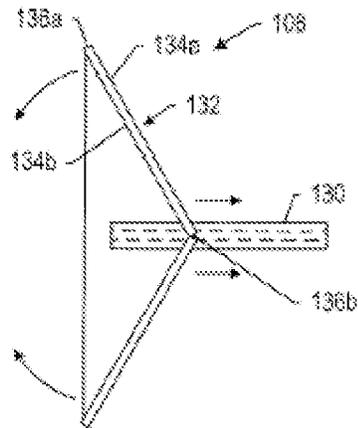


FIG. 6c

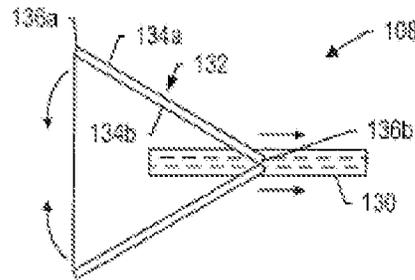


FIG. 6d

Figures 6c and 6d are top views of the movable structure during stages of a power cycle. Spec. 4.

Comparison of the second configuration illustrated in Appellant's Figure 6e with the annotated redacted reproduction of Ricketts' Figure 1 identified by the Examiner as corresponding to the claimed second configuration demonstrates that the Examiner's construction of the claim term "against" is overly broad. In fact, the latter figure resembles an intermediate stage between the claimed first and second configurations such as that illustrated by Appellant's Figures 6c and 6d *supra*, as opposed to the claimed second configuration. Specifically, the Specification states that the movement depicted in Figures 6c and 6d "may continue until the canopy lies approximately against the base, at which point the movable structure is in the second configuration . . . as shown in FIG. 6e." Spec. 10.

For this reason, we do not sustain the Examiner's decision rejecting claim 1 and its dependent claims 2, 4, 10, and 22.

Claim 11 also requires a second configuration wherein “the canopy lies approximately against the base.” Appeal Br. 14 (Claims App.). Thus, the Examiner’s rejection of claim 11 suffers from the same deficiencies as the rejection of claim 11. Accordingly, we do not sustain the Examiner’s decision rejecting claim 11, and its dependent claims 12, 13, 15, and 21 for the same reasons we do not sustain the Examiner’s decision rejecting claim 1.

DECISION

The Examiner’s rejection of claims 1, 2, 4, 10–13, 15, 20, and 21 are REVERSED.

REVERSED