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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte PHILIP FREEDMAN

Appeal 2010-007290
Application 11/381,583
Technology Center 2800

Before: MARC S. HOFF, CARLA M. KRIVAK, and ELENI MANTIS
MERCADER *Administrative Patent Judges.*

HOFF, *Administrative Patent Judge.*

DECISION ON REQUEST FOR REHEARING

INTRODUCTION

Appellant's Request for Rehearing, filed January 20, 2013, contends that we erred in our Decision on Appeal entered November 28, 2012, in which we affirmed the rejection of claims 1-7, 9, and 21-31.¹

OPINION

We will maintain the rejection.

ANALYSIS

ANALOGOUS ART

Appellant argues that the Smalley and Diprizio electrode structures are not reasonably pertinent structures to the claimed thermoelectric device having a discontinuous fullerene thin film (Req. for Reh'g 5).

Appellant contends that the problem faced by the inventor was dissipation of heat in a thermoelectric structure, and that Diprizio and Smalley are not concerned with the heat dissipation problem faced by the inventor (Req. for Reh'g 6). Appellant further argues that Smalley and Diprizio are not concerned with dissipation of heat from physical objects, not concerned with electrical circuits, and not concerned with "circuit structure type electrodes" (Req. for Reh'g 7). According to Appellant, the electrode structures are different from Kadotani and from the claimed structures (*id.*).

Appellant's arguments are not persuasive to establish that the Board misapprehended the test for analogous art. Kadotani is directed to a

¹ Claims 8 and 10-20 have been cancelled.

temperature control device having a multitude of thermoelectric conversion elements. Kadotani teaches ““thermoelectric device[s]”” (col. 5, ll. 22-23) including a plurality of electrodes 5, 7 which function as the upper and lower heat exchange surfaces (col. 5, ll. 40-44). In the Decision, we affirmed the Examiner’s finding that Kadotani teaches all the features of the thermoelectric structure of representative claim 1, except for a fullerene thin film (Decision 4). Smalley is relied upon for teaching a fullerene thin film that is useful as an electrode (col. 30, ll. 7-17). Diprizio is relied upon for teaching carbon fullerenes as a suitable electrode material substitute for copper (col. 3, ll. 53-57). Because Smalley and Diprizio suggest the use of fullerene material for an electrode, i.e., a component used for heat exchange in Kadotani, the Board maintains its conclusion that Smalley and Diprizio are analogous to Kadotani and to the claimed invention. All three references are reasonably pertinent to the problem of heat dissipation faced by Appellant.

We do not agree with Appellant that Specification paragraph [0003] does not define the problem faced by the inventor of the *claimed* invention (Req. for Reh’g 6). Paragraph [0003] discloses the need for dissipation of heat from physical objects, especially integrated circuits. This disclosure is highly similar to the Brief Description of the Invention, paragraph [0008], which discloses a structure that provides an effective conductive heat transfer pathway.

COMBINATION OF REFERENCES

Appellant continues to contend that the references, combined in any manner, do not teach or suggest the claimed ““patterned discontinuous

fullerene thin film” structure “coupled electrically in series and thermally in parallel” (Req. for Reh’g 9).

Appellant’s argument that the references are not properly combinable because the electrode structures of the references are “decidedly not the same” (Req. for Reh’g 9) is not persuasive to show that the Board erred. In the Decision, the Board agreed with the Examiner’s finding that Kadotani teaches all the features of representative claim 1, including a patterned discontinuous film, except for a fullerene thin film (Decision 4, citing Ans. 4). Smalley was relied upon for a teaching that a fullerene thin film is useful as an electrode (Decision 4). Diprizio was relied upon for a teaching that carbon fullerenes are a suitable electrode material substitute for copper (Decision 4, citing Ans. 4). Appellant’s argument that Smalley does not teach or suggest equivalence of a fullerene interconnected structure “coupled electrically in series and thermally in parallel” (Req. for Reh’g 10) is not relevant to the rejection affirmed in the Decision, because Kadotani, rather than Smalley, was relied upon to teach such coupling.

We therefore conclude that Appellant has not shown any points which we misapprehended or overlooked in our Decision.

CONCLUSION

In summary, we have granted Appellant’s request for rehearing to the extent that we have reconsidered our decision rejecting claims 1-7, 9, and 21-31 under 35 U.S.C. § 103(a), but we decline to modify the decision in any way.

Appeal 2010-007290
Application 11/381,583

REHEARING DENIED

gvw