UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ANGELA T. HUI

Appeal 2007-3197
Application 10/871,131
Technology Center 1700

Decided: October 29, 2007

Before EDWARD C. KIMLIN, THOMAS A. WALTZ, and
JEFFREY T. SMITH, *Administrative Patent Judges*.

KIMLIN*, Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1-20. Claims 21-37 stand withdrawn from consideration. Claim 1 is illustrative:

1. A system for in-situ surface treatment in fashioning a memory cell comprising:

a gas distribution system that selectively provides a fluorine (F) based gas into a processing chamber; and

an excitation system that electrically excites the fluorine based gas to establish a plasma in the chamber which interacts with a conductive surface to transform the surface from a conductive material into a passive layer that includes a conductivity facilitating compound having conductivity facilitating properties.

The Examiner relies upon the following references in the rejection of the appealed claims:

Carducci	2003/0037880 A1	Feb. 27, 2003
Grimbergen	6,835,275 B1	Dec. 28, 2004

Appellant's claimed invention is directed to a system for in-situ surface treatment to make a memory cell. The system comprises a gas distribution system that selectively provides a fluorine-based gas into a processing chamber, and an excitation system for making a plasma from the gas in the chamber. The plasma is used to change the surface of a conductive material into a passive layer.

Appealed claims 1-16 and 20 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Carducci. Claims 1-10 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Grimbergen. Also, claims 17-19 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Carducci in view of Grimbergen.

With the exception of claims 14 and 17, Appellant has not separately argued the appealed claims under rejection. Accordingly, with the noted exceptions, the groups of claims separately rejected by the Examiner stand or fall together.

We have thoroughly reviewed each of Appellant's arguments for patentability. However, we are in full agreement with the Examiner that the claimed subject matter is unpatentable over the cited prior art. Accordingly,

we will sustain the Examiner's rejections for the reasons set forth in the Answer, which we incorporate herein, and we add the following for emphasis only.

Appellant's arguments in the Principal and Reply Briefs on appeal miss the thrust of the Examiner's rejections. It is not the Examiner's position that the systems of Carducci and Grimbergen perform the method intended for Appellant's system, namely, utilizing a fluorine plasma to transform the surface of a conductive material into a passive layer. Rather, the Examiner's rejections are based on facts not disputed by Appellant, namely, that both references describe systems or apparatus that comprise the presently claimed gas distribution system which provides a fluorine-based gas into a reaction chamber and an excitation system that electrically excites the fluorine-based gas to establish a plasma in the chamber.

The Examiner's rationale is that although neither reference describes transforming the surface of a conductive layer, the system of each reference is fully capable of doing so. The Examiner correctly sets forth that the intended use of a claimed system or apparatus cannot serve to structurally distinguish the system or apparatus from a system or apparatus of the prior art that is used in a different manner, and that a claim recitation of a material or article worked upon by the apparatus does not define the relevant structure of the claimed system or apparatus.

Also, Appellant does not dispute the Examiner's factual determination that Grimbergen discloses a measurement and control system for the gas distribution system, excitation system, pressure control system, and heating system for facilitating the desired thickness of the composition of the formed layer, or the rate at which the layer is formed (see Answer 5).

Appellant contends that Carducci "does not teach, suggest, or even contemplate memory cell formation let alone an excitation system that exposes a conductive layer to be transformed into a passive layer as in the claimed invention" (Principal Br. 4, last para.). However, this form of argument that is prevalent throughout the Principal and Reply Briefs does not refute the Examiner's position that Carducci describes a system that is **capable** of transforming an exposed conductive layer to a passive layer. Appellant's argument that the Examiner's finding concerning the capability of Carducci's system is incorrect lacks factual support. Appellant focuses upon the particular process disclosed by Carducci rather than what the system is capable of. As explained by the Examiner, Grimbergen discloses that the plasma processing apparatus is capable of performing a wide variety of etching, deposition and treatment processes. We note that Appellant does not address the Examiner's finding that Appellant's memory cell formation requires many single steps, such as the deposition and etching of material, which the apparatus of Grimbergen is fully capable of performing.

The flaw in Appellant's line of argument is underscored in the statement that "[s]ince the claimed invention contemplates exposing an underlying conductive layer to the electrically-excited fluorine-based gas, it is clear that the fluorine-based gas is selectively only being applied to the underlying layer that is being exposed *via* a trench (as claimed, for example, in claim 4)" (Reply Br., sentence bridging pages 2-3). Manifestly, how Appellant **contemplates using** the claimed system is not germane to the structure defined by the claimed system, vis-à-vis, the structures described by Carducci and Grimbergen. It must be emphasized that Appellant is claiming a system, i.e., an apparatus, not a method of using the system.

As for the § 103 rejection, we note that Appellant bases no argument upon objective evidence of nonobviousness, such as unexpected results.

In conclusion, based on the foregoing and the reasons well stated by the Examiner, the Examiner's decision rejecting the appealed claims is affirmed.

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

AFFIRMED

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