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[54] **TRANSPARENT, FLEXIBLE PERMEABILITY BARRIER FOR ORGANIC ELECTROLUMINESCENT DEVICES**

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[52] **U.S. Cl.** **445/24**; 445/58

[58] **Field of Search** 445/24, 58

[56] **References Cited**

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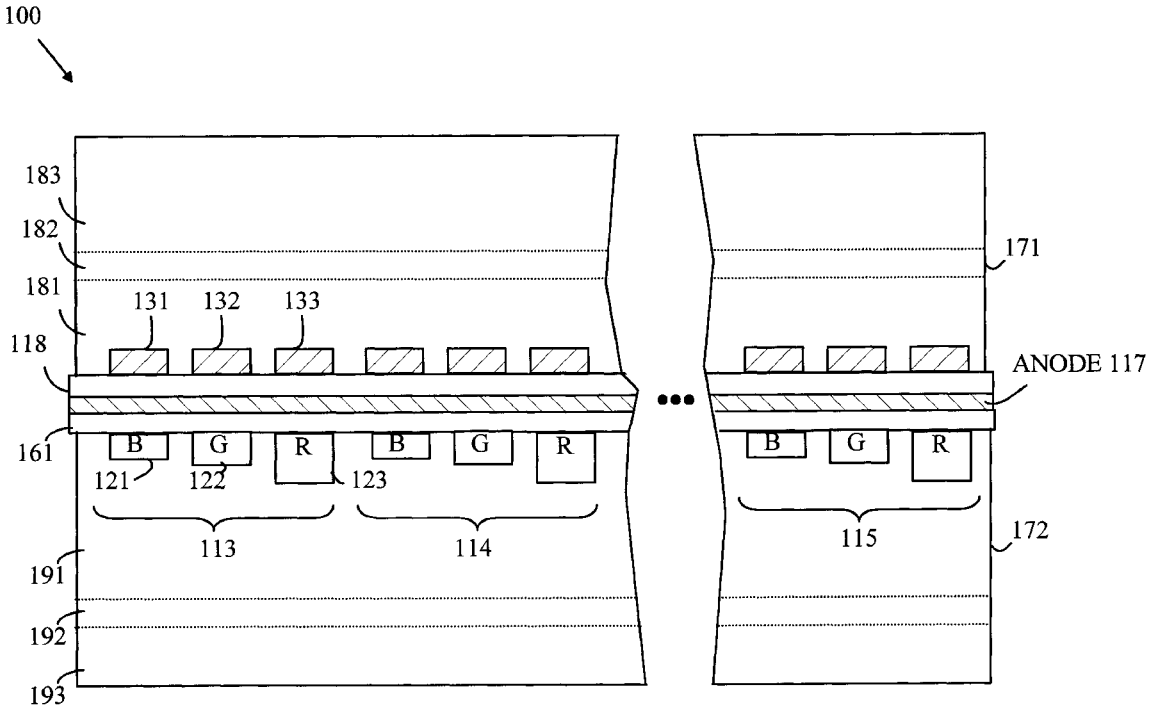
[57] **ABSTRACT**

A barrier for preventing water or oxygen from a source thereof from reaching a device that is sensitive to water or oxygen. The barrier is constructed by depositing a first polymer layer between the device and the source. An inorganic layer is deposited on the first polymer layer of the device by plasma enhanced chemical vapor deposition utilizing an electron cyclotron resonance source ECR-PECVD. A second polymer layer is then deposited on the inorganic layer. The inorganic layer is preferably an oxide or nitride. A second barrier layer having a compound that absorbs oxygen or water can be placed between the inorganic layer and the device to further retard the passage of oxygen or water. The present invention is particularly useful in encapsulating electroluminescent displays.

11 Claims, 2 Drawing Sheets