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(54) **LITHIUM SECONDARY BATTERY**

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(57) **ABSTRACT**

There is provided a lithium secondary battery with a negative electrode which comprises a negative electrode active material layer comprising alloy particles comprising silicon and tin and having an average particle diameter of 0.05 to 2  $\mu\text{m}$  as an active material, and a negative electrode current collector, wherein the negative electrode active material layer has a storage capacity of 1,000 to 2,200 mAh/g and a density of 0.9 to 1.5 g/cm<sup>3</sup> and which thereby has a high capacity and a good cycle-characteristic. Thus, a lithium secondary battery having a high capacity and a long life and so designed as to exhibit these characteristics at the same time is provided.

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**Related U.S. Application Data**

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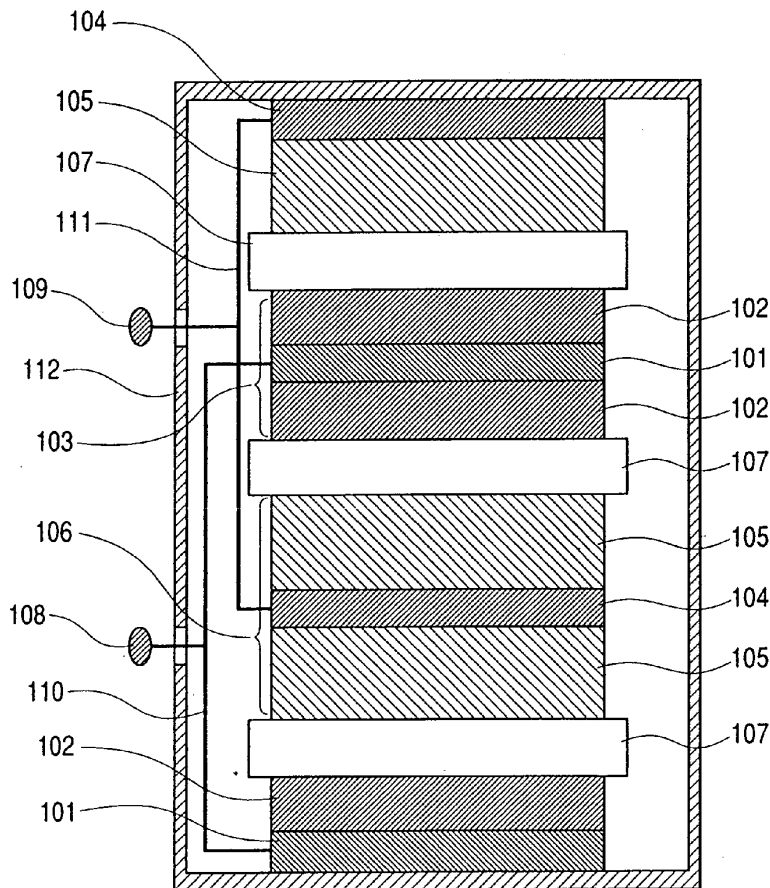


FIG. 1

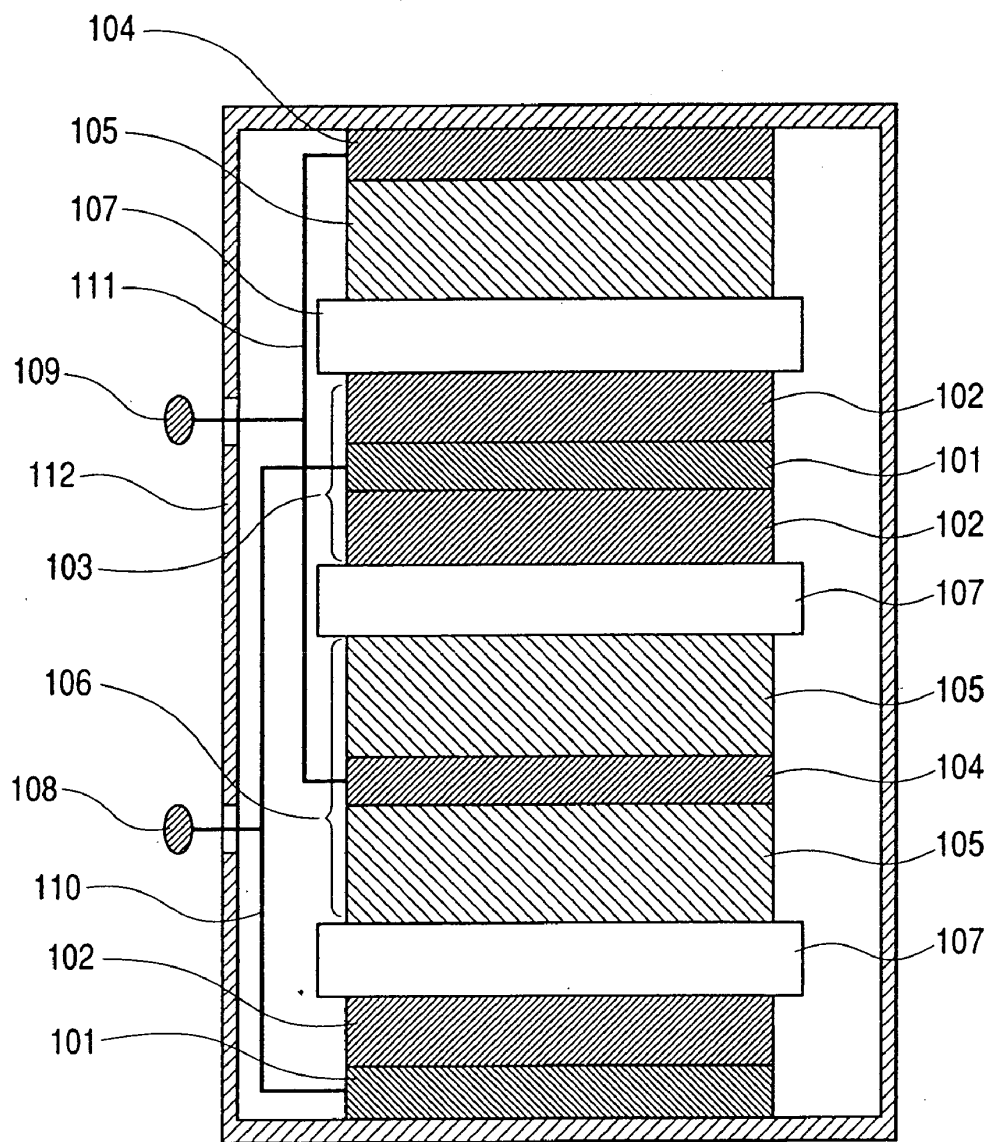
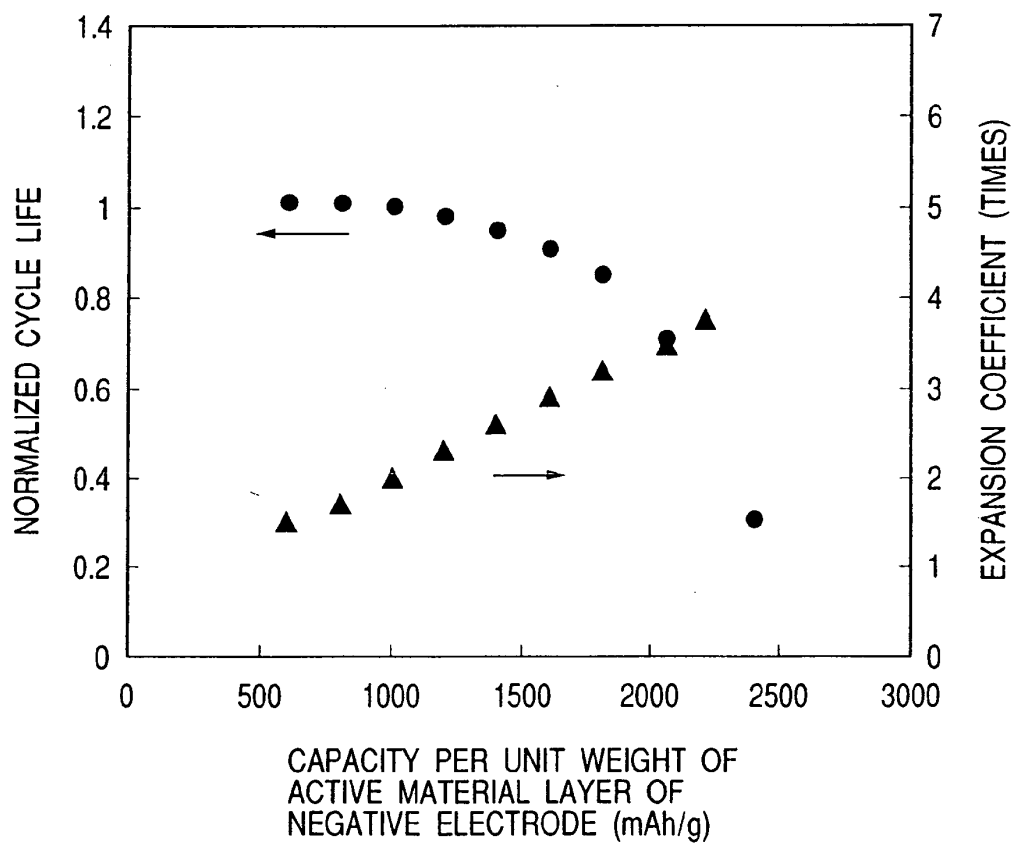


FIG. 2



*FIG. 3*

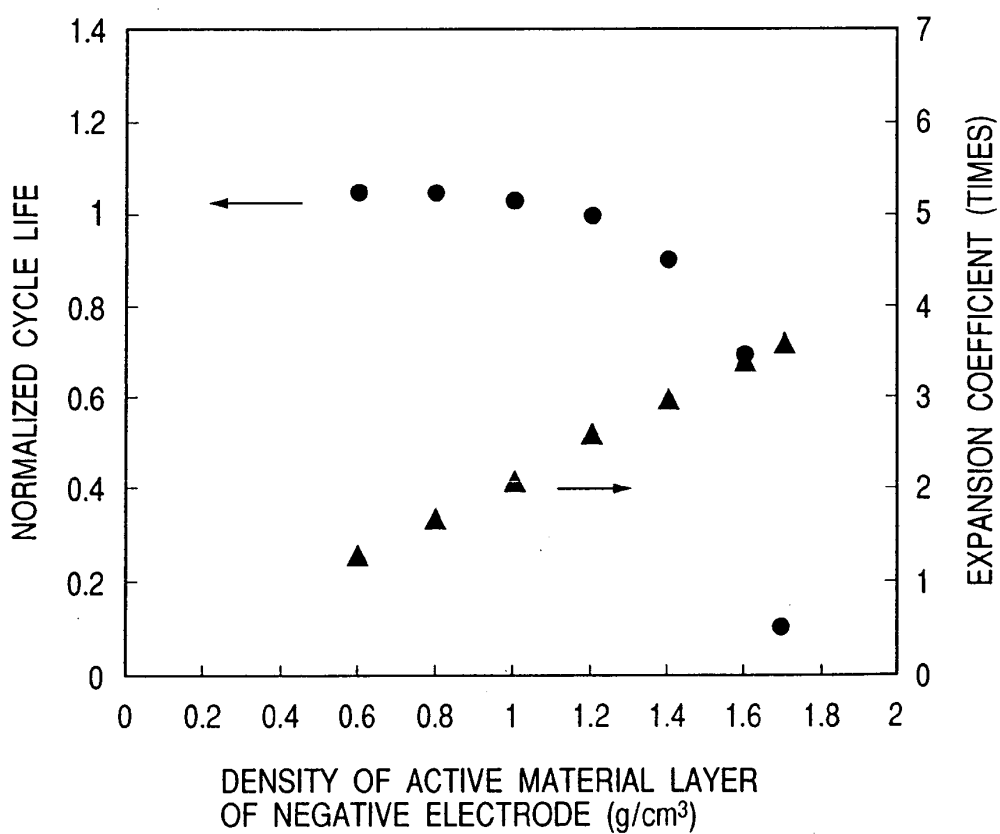
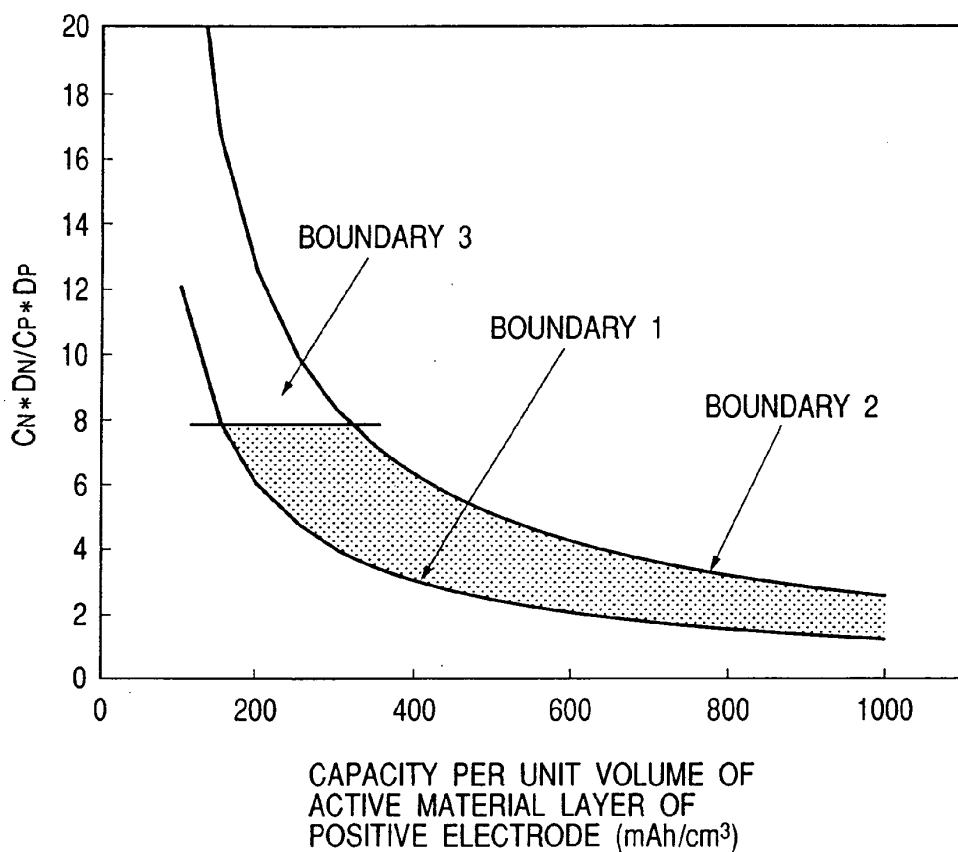


FIG. 4



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