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(54) **Title:** SYSTEMS AND METHODS FOR FABRICATING CARBON NANOTUBE-BASED VACUUM ELECTRONIC DEVICES

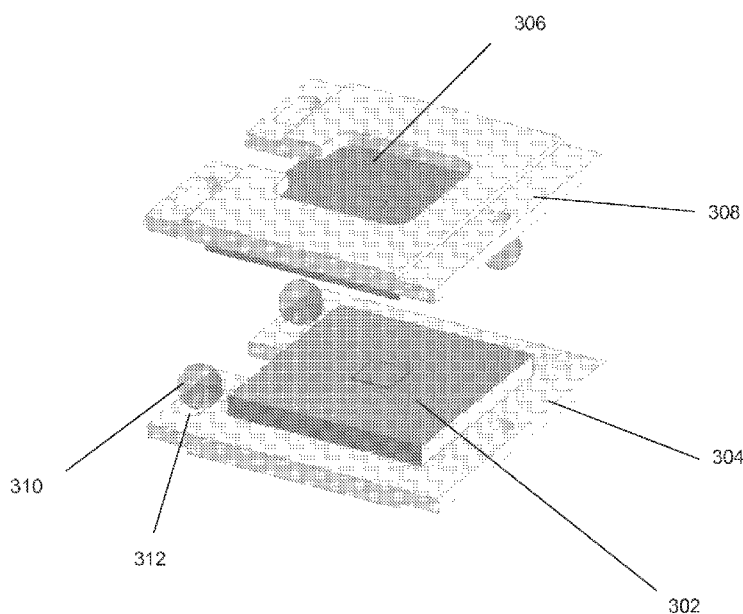


FIG. 3

(57) **Abstract:** Systems and methods in accordance with embodiments of the invention proficiently produce carbon nanotube-based vacuum electronic devices. In one embodiment a method of fabricating a carbon nanotube-based vacuum electronic device includes: growing carbon nanotubes onto a substrate to form a cathode; assembling a stack that includes the cathode, an anode, and a first layer that includes an alignment slot; disposing a microsphere partially into the alignment slot during the assembling of the stack such that the microsphere protrudes from the alignment slot and can thereby separate the first layer from an adjacent layer; and encasing the stack in a vacuum sealed container.