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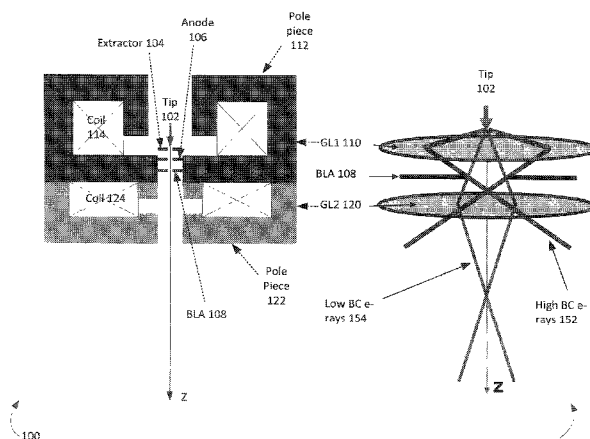
(54) Title: DUAL-LENS-GUN ELECTRON BEAM APPARATUS AND METHODS FOR HIGH-RESOLUTION IMAGING
WITH BOTH HIGH AND LOW BEAM CURRENTS

FIG. 1

(57) Abstract: One embodiment relates to an electron beam apparatus which includes a dual-lens electron gun for emitting an elec-
tron beam. The electron beam is a high beam-current electron beam in a first operating mode and a low beam-current electron beam
in a second operating mode. The apparatus further includes a column aperture which is out of the path of the high beam-current elec-
tron beam in the first operating mode and is centered about an optical axis of the electron beam apparatus in the second operating
mode. Another embodiment relates to an electron gun which includes a first gun lens, a beam limiting aperture, and a second gun
lens. The first gun lens focuses the electrons before they pass through the beam-limiting aperture while the second gun lens focuses
the electrons after they pass through the beam-limiting aperture. Other embodiments, aspects and features are also disclosed.