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(54) Title: SUPERCONDUCTING CIRCUIT WITH MAGNETIC-FLUX-TUNABLE ELEMENTS, AND METHODS FOR MINIMIZING FLUX CROSSTALK BETWEEN MAGNETIC FLUX-TUNABLE ELEMENTS IN SUPERCONDUCTING CIRCUITS

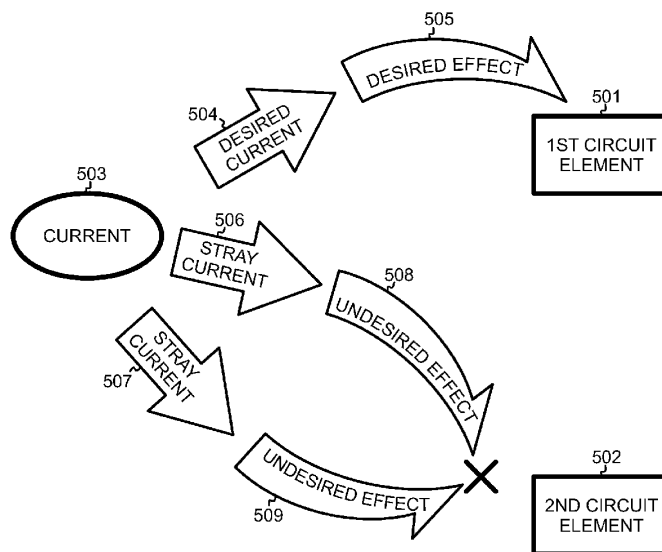


Fig. 5

(57) Abstract: A superconducting circuit comprises a first and second magnetic-flux-tunable elements (501, 502). Each of these has a respective flux-sensitive part. First and second current-driven superconductive on-chip flux bias lines are provided. Each of these passes adjacent to the flux-sensitive part of the respective magnetic-flux-tunable element (501, 502). A first plurality of superconductive stray current paths exists adjacent to the first magnetic-flux-tunable element. A second plurality of superconductive stray current paths exist adjacent to the second magnetic-flux-tunable element. The superconductive stray current paths distribute stray currents (506, 507) originating from the flux line of the other magnetic-flux-tunable element (501) into a respective plurality of stray currents around the respective magnetic-flux-tunable element (502). This way the stray currents (506, 507) are kept from changing the electric characteristics

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of the respective magnetic-flux-tunable element (502).