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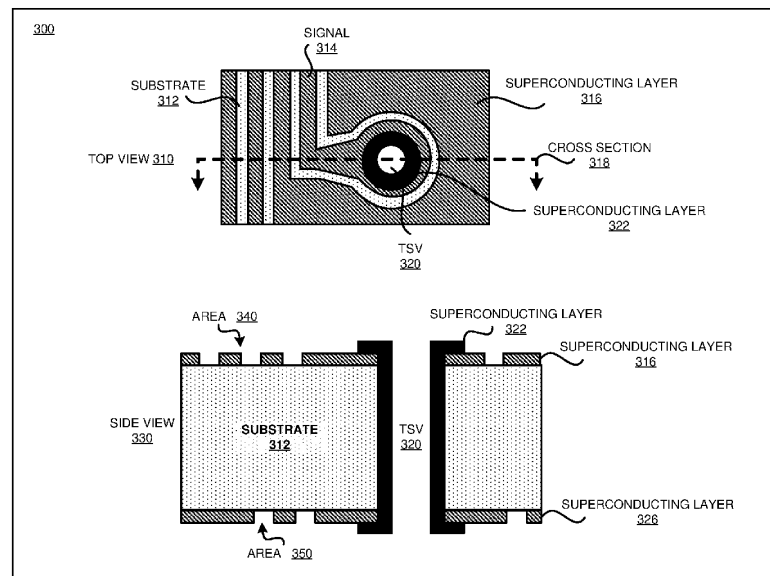
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(54) Title: THROUGH-SILICON-VIA FABRICATION IN PLANAR QUANTUM DEVICES

FIGURE 3



(57) Abstract: On a first superconducting layer (316) deposited on a first surface of a substrate (312), a first component of a resonator is patterned. On a second superconducting layer (326) deposited on a second surface of the substrate (312), a second component of the resonator is patterned. The first surface and the second surface are disposed relative to each other in a non-co-planar disposition. In the substrate, a recess is created, the recess extending from the first superconducting layer to the second superconducting layer. On an inner surface of the recess, a third superconducting layer (322) is deposited, the third superconducting layer forming a superconducting path between the first superconducting layer and the second superconducting layer. Excess material of the third superconducting layer is removed from the first surface and the second surface, forming a completed through-silicon via TSV (320).

[Continued on next page]

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