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(54)RESONATOR ARRAYS FOR WIRELESS **ENERGY TRANSFER**

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sional application No. 61/147,386, filed on Jan. 26, 2009, provisional application No. 61/152,086, filed on Feb. 12, 2009, provisional application No. 61/178,508, filed on May 15, 2009, provisional application No. 61/182,768, filed on Jun. 1, 2009, provisional application No. 61/121,159, filed on Dec. 9, 2008, provisional application No. 61/142,977, filed on Jan. 7, 2009, provisional application No. 61/142,885, filed on Jan. 6, 2009, provisional application No. 61/142,796, filed on Jan. 6, 2009, provisional application No. 61/142,889, filed on Jan. 6, 2009, provisional application No. 61/142,880, filed on Jan. 6, 2009, provisional application No. 61/142,818, filed on Jan. 6, 2009, provisional application No. 61/142,887, filed on Jan. 6, 2009, provisional application No. 61/156,764, filed on Mar. 2, 2009, provisional application No. 61/143,058, filed on Jan. 7, 2009, provisional application No. 61/163,695, filed on Mar. 26, 2009, provisional application No. 61/172,633, filed on Apr. 24, 2009, provisional application No. 61/169,240, filed on Apr. 14, 2009, provisional application No. 61/173,747, filed on Apr. 29, 2009, provisional application No. 61/152,390, filed on Feb. 13, 2009.

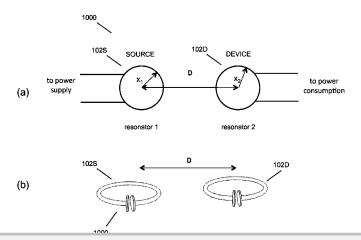
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(57)ABSTRACT

Described herein are improved configurations for an apparatus that may include a plurality of resonators electrically interconnected and arranged in an array to form a composite resonator for wireless power transfer, each one of the plurality of resonators may include a block of a magnetic material having a conductor wire wrapped around a cross section thereof to form at least one loop enclosing an area substantially equal to the cross section, wherein the plurality of resonators are may be oriented so that a dipole moment of each one of the plurality of resonators is aligned with a dipole moment of each other one of the plurality of resonators.





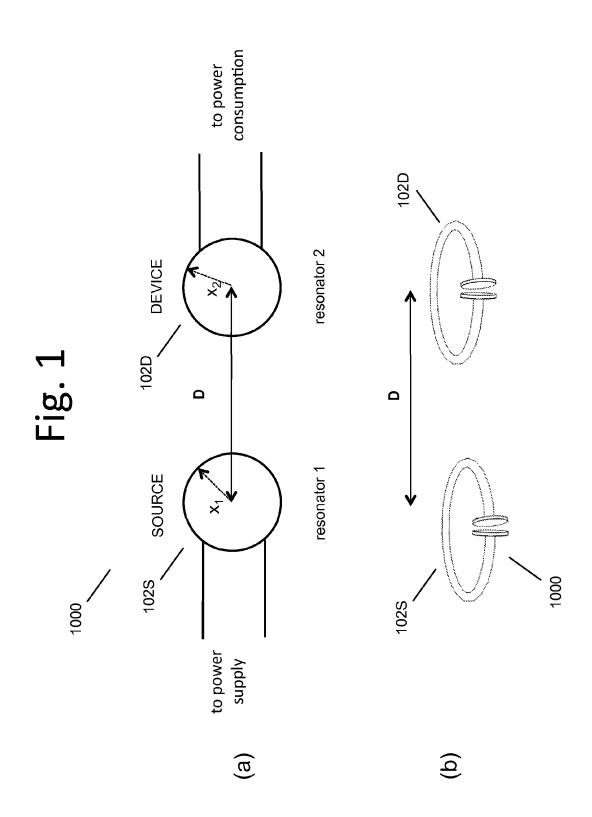
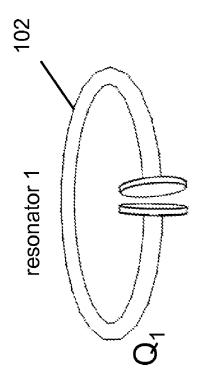




Fig. 2



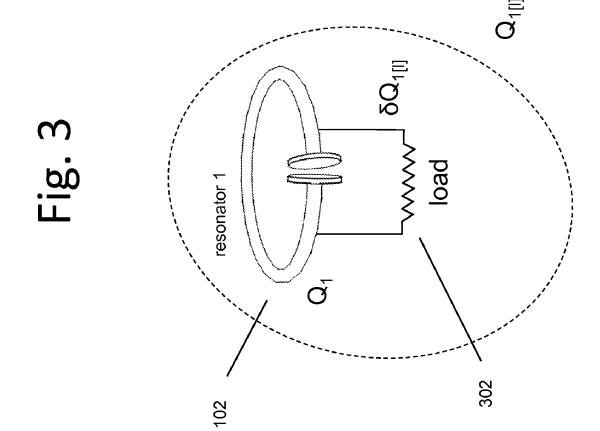
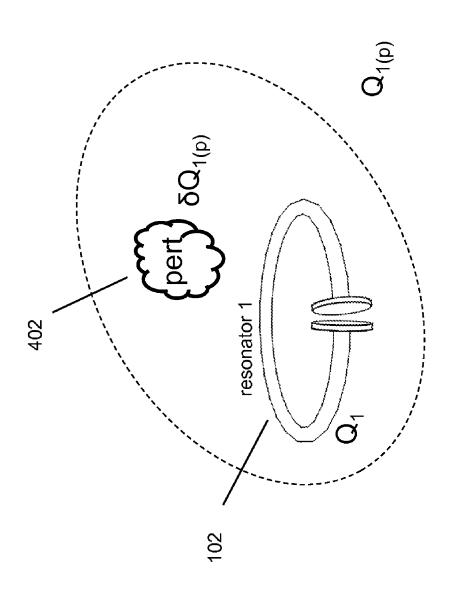




Fig. 4



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