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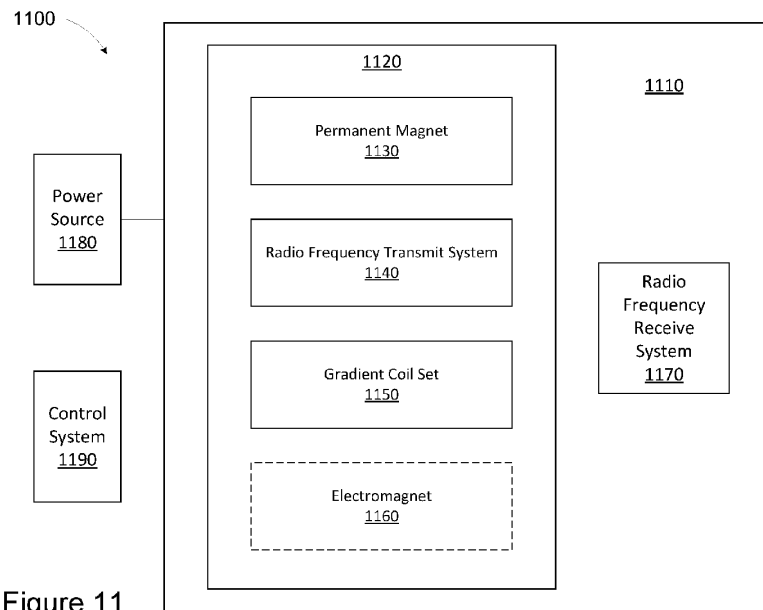


Figure 11

(57) Abstract: A method for performing magnetic resonance imaging is provided. The method includes providing a magnetic resonance imaging system comprising: a radio frequency receive system comprising a radio frequency receive coil, and a housing, wherein the housing comprises a permanent magnet for providing an inhomogeneous permanent gradient field, a radio frequency transmit system, and a single-sided gradient coil set. The method also includes placing the receive coil proximate a target subject; applying a sequence of chirped pulses via the transmit system; applying a multi-slice excitation along the inhomogeneous permanent gradient field; applying a plurality of gradient pulses via the gradient coil set orthogonal to the inhomogeneous permanent gradient field; acquiring a signal of the target subject via the receive system, wherein the signal comprises at least two chirped pulses; and forming a magnetic resonance image of the target subject.

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