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(54) **CONTACTLESS ELECTRICAL ENERGY TRANSMISSION SYSTEM HAVING A PRIMARY SIDE CURRENT FEEDBACK CONTROL AND SOFT-SWITCHED SECONDARY SIDE RECTIFIER**

(52) **U.S. Cl.** 363/37

(57) **ABSTRACT**

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A contactless electrical energy transmission system includes a transformer having a primary winding that is coupled to a power source through a primary resonant circuit and a secondary winding that is coupled to a load through a secondary resonant circuit. The primary and secondary resonant circuits are inductively coupled to each other. A primary control circuit detects current changes through the primary resonant circuit to control the switching frequency of a controllable switching device for maintaining a substantially constant energy transfer between the primary winding and secondary winding in response to at least one of a power source voltage change and a load change. As a result, excessive circulating energy of the CEET system is minimized providing a tight regulation of the output voltage over the entire load and input voltage ranges without any feedback connection between the primary side and the secondary side.

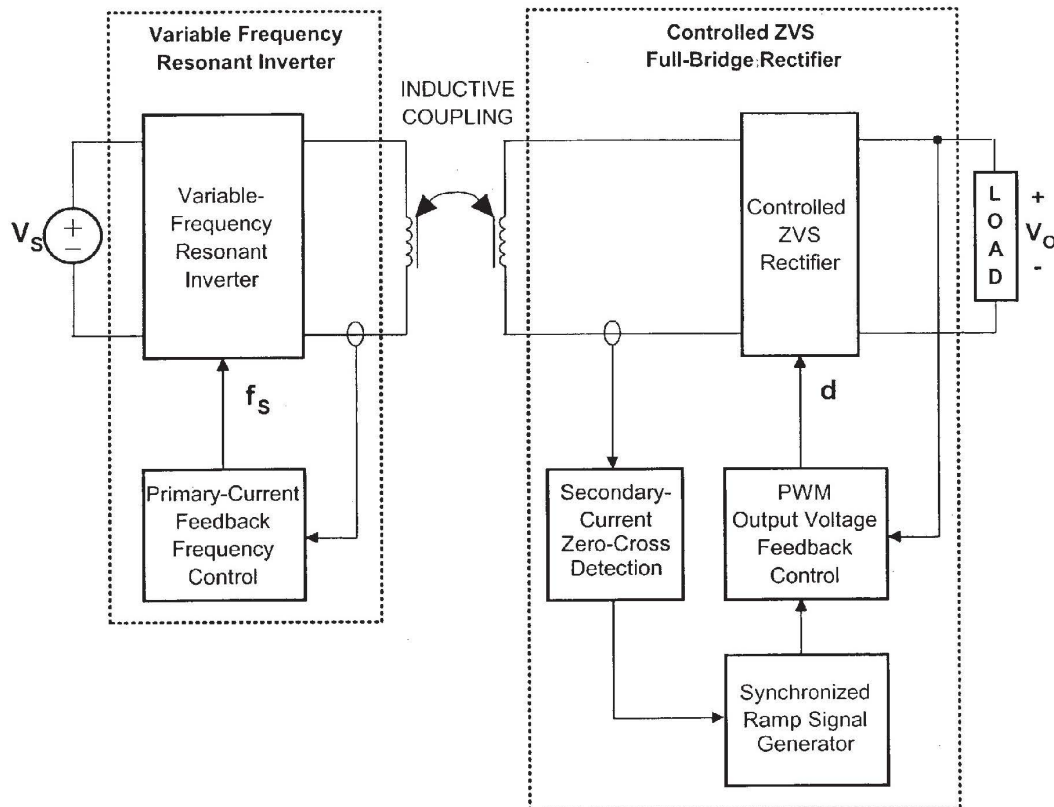
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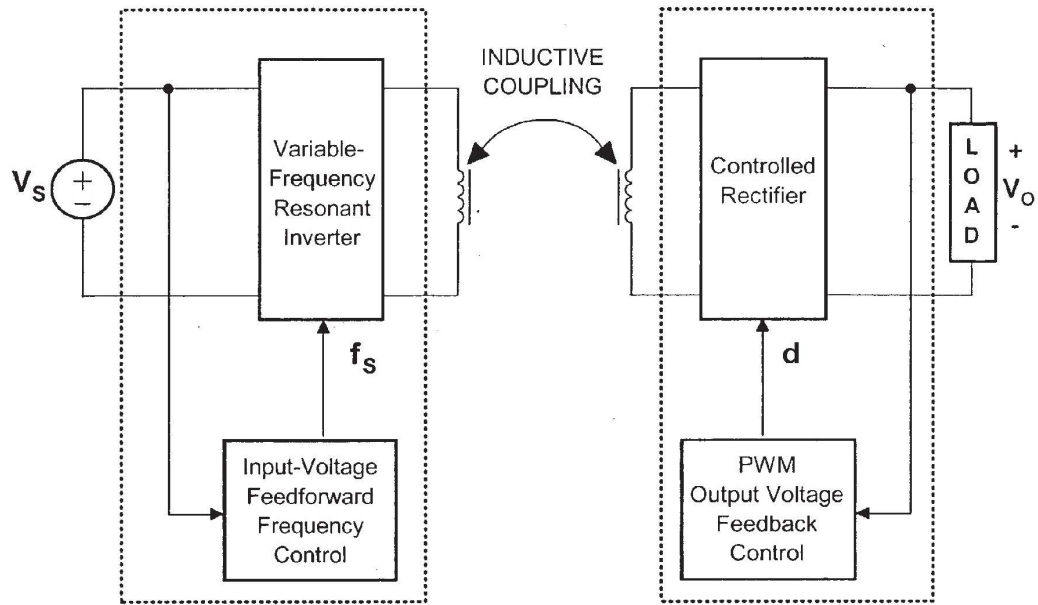
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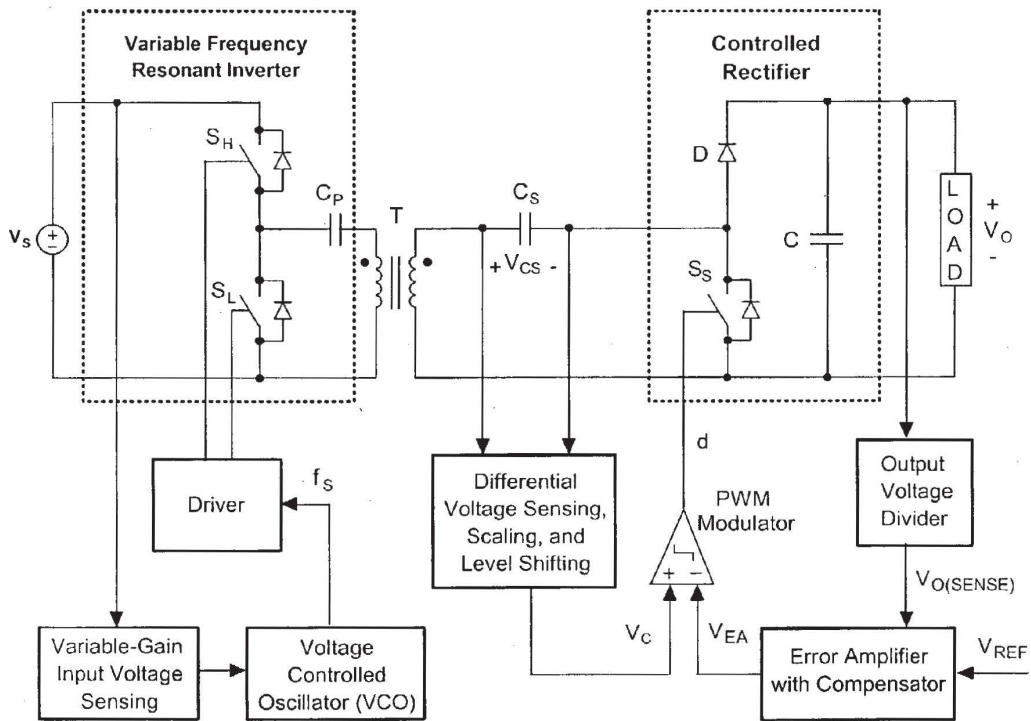
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(PRIOR ART)
Fig. 1



(PRIOR ART)
Fig. 2

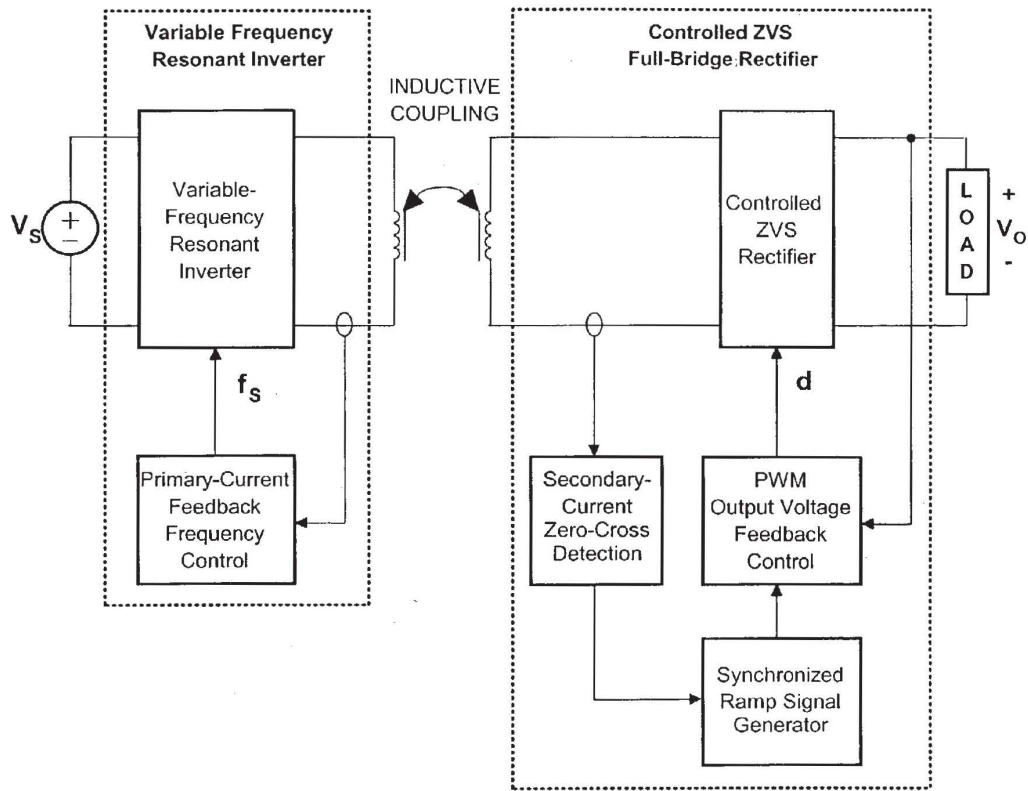


Fig. 3

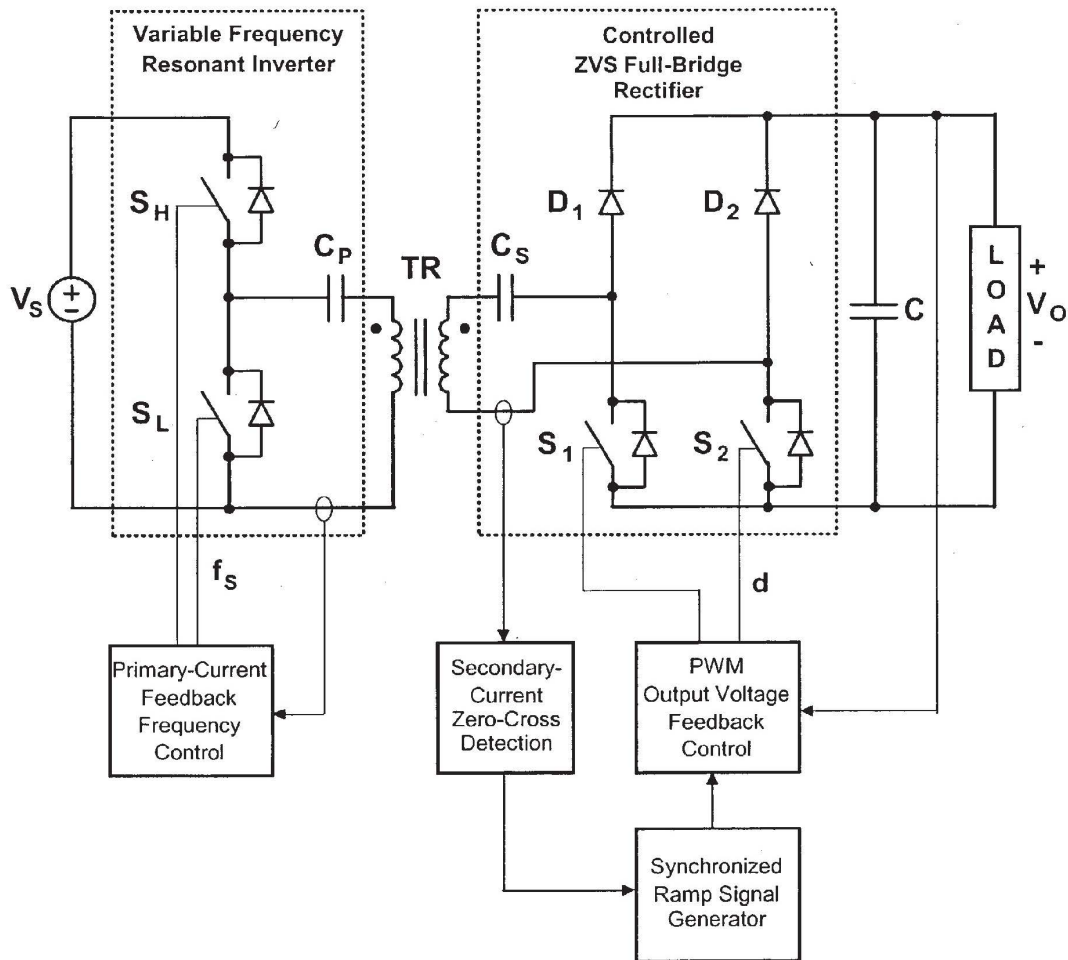


Fig. 4

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