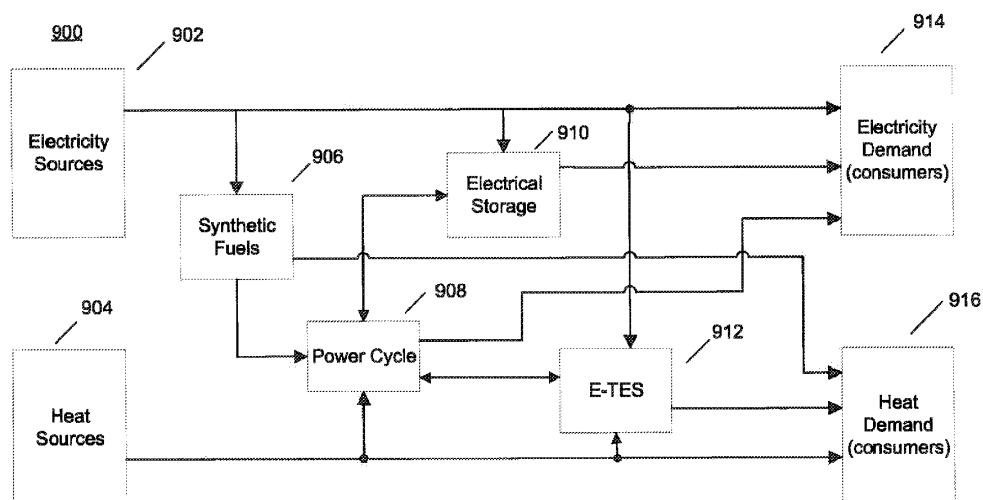




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(54) Title: ELECTRICALLY CONDUCTIVE FIREBRICK SYSTEM

FIG. 9



(57) Abstract: A thermal energy storage system includes a firebrick checkerwork and an electrode. The firebrick checkerwork includes one or more conductive firebrick layers, each including a plurality of electrically conductive doped metal oxide firebricks with one or more airflow vents. The electrode includes one or more electrode firebrick layers, each layer including a plurality of electrode firebricks. The firebrick checkerwork is heated due to application of electrical power to the electrode. Air flowing through the firebrick checkerwork may then be heated for use in heat-related applications (e.g., an industrial application, commercial application, residential application, transportation application, etc.) some of which may relate to electricity production or in other applications which may relate to other purposes that require heat that are unrelated to electricity production.

[Continued on next page]

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