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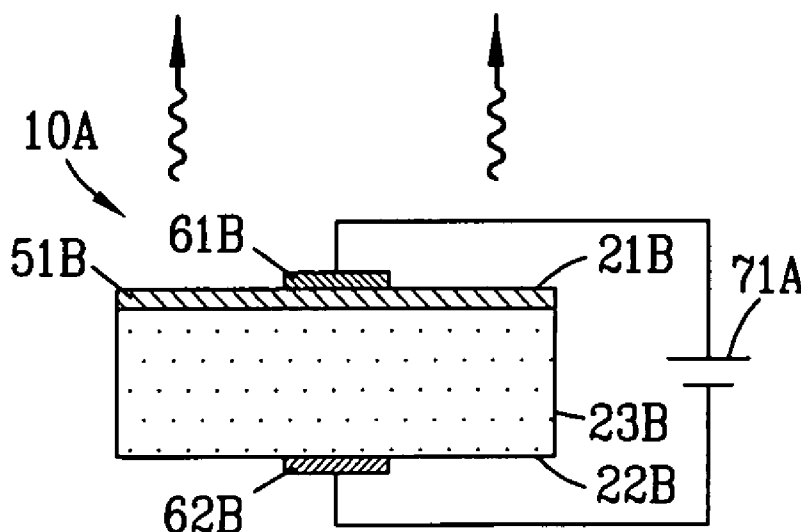
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(54) Title: ENERGY CONVERSION DEVICE

**FIG. 4A**

(57) Abstract: An energy conversion device and method of making is disclosed for converting energy between electromagnetic and electrical energy. The energy conversion device comprises a wide bandgap semiconductor material having a first doped region and a second doped region formed in situ by a thermal energy beam. In one embodiment, the energy conversion device operates as a light emitting device to produce electromagnetic radiation upon the application of electrical power. In a second embodiment, the energy conversion device operates as a photovoltaic device to produce electrical power upon the application of electromagnetic radiation. In a third embodiment, the energy conversion device is formed through the conversion of an insulating material. The photovoltaic device may be combined with a solar liquid heater for providing electrical power and heated liquid upon the application of electromagnetic radiation.