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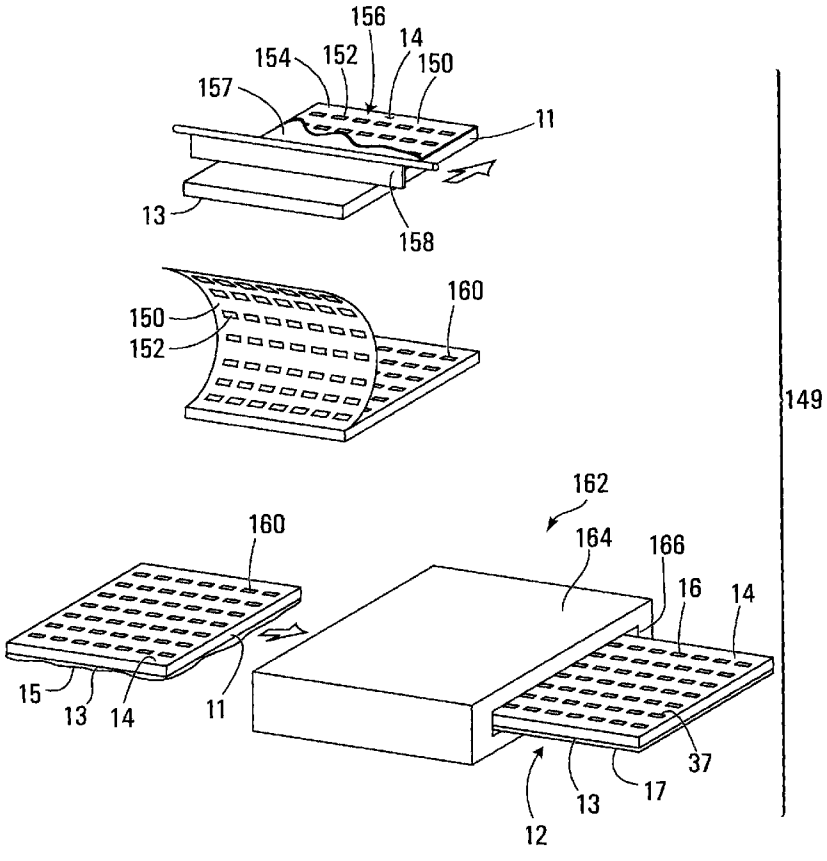
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(54) Title: SOLAR CELL WITH PHYSICALLY SEPARATED DISTRIBUTED ELECTRICAL CONTACTS



(57) Abstract: A photovoltaic apparatus has a semiconductor photovoltaic cell structure having a front surface and a back surface provided by respectively doped portions of semiconductor material forming a photovoltaic junction. A plurality of separate electrical contacts is embedded in the front side surface of the respective one of the portions of semiconductor material. The electrical contacts are distributed in two dimensions across the surface and are separated from each other and are in electrical contact with the respective one of the portions of semiconductor material. A back side electrical contact is provided on the back surface of the other of the respective portions of semiconductor material and in electrical contact therewith. A solar cell apparatus includes the apparatus above and electrodes for contacting the electrical contacts on the front and back side surfaces respectively of the semiconductor material.

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