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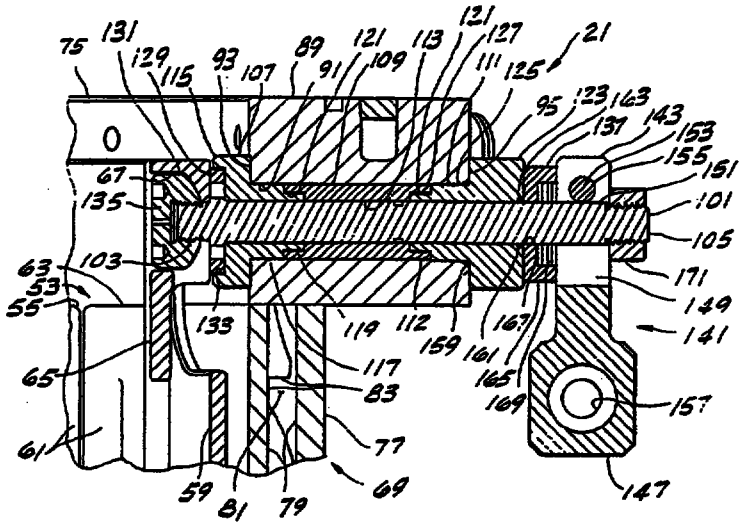
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(54) Title: ELECTRODE ASSEMBLY FOR ELECTRICAL RESISTANCE HEATER USED IN CRYSTAL GROWING APPARATUS



(57) Abstract

An electrode assembly for use with an electrical resistance heater mounted in a housing of a crystal puller used for growing monocrystalline silicon ingots according to the Czochralski method comprises an electrode having a first end in electrical connection with the heater within the housing and an outer end. The electrode extends through the crystal puller housing such that the outer end of the electrode is generally external of the housing. The portion of the electrode within the housing is generally solid in cross-section along the entire length of said portion and free of any internal cooling passages. An electrical conductor is electrically connected to a portion of the electrode extending externally of the housing for supplying electrical current to the electrode from a source of electrical current for conduction inward along the electrode to the heater located in the housing. The electrical conductor is also in thermally conductive engagement with the external portion of the electrode and has an internal passage extending therethrough for receiving cooling media in the conductor for use in extracting heat from the external portion of the electrode.

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