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(54) **METHOD AND APPARATUS FOR PERFORMING FAULT DETECTION, AND PHOTOVOLTAIC POWER GENERATION SYSTEM**

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(57) **ABSTRACT**

A method and an apparatus (**400**) for performing fault detection, are provided includes: controlling, by a power station management system in a preset photovoltaic module order by using an inverter connected to a current to-be-detected photovoltaic module, the current to-be-detected photovoltaic module to be in a target status, and when determining that the current to-be-detected photovoltaic module is in the target status, controlling a mobile image capturing terminal to collect image data of the current to-be-detected photovoltaic module (S**201**), where the image data is used to detect a fault status of the current to-be-detected photovoltaic module; and when determining that the mobile image capturing terminal obtains the image data of the current to-be-detected photovoltaic module through collection, continuing, by the power station management system, to control, in the preset photovoltaic module order by using an inverter connected to a next to-be-detected photovoltaic module.