A Retractable Drying and Planting Rack for AgroPhotovoltaics Farm

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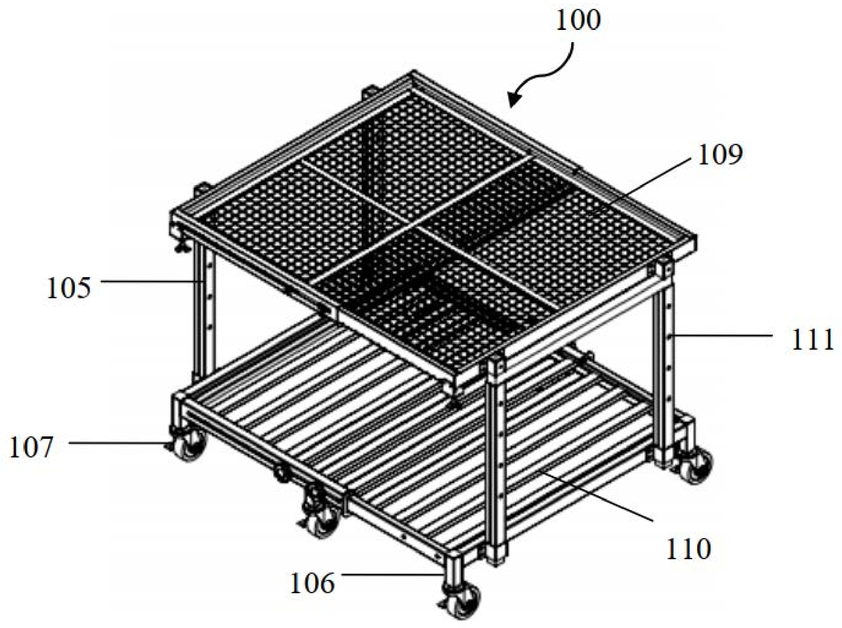

INTRODUCTION OF TECHNOLOGY

The concept of AgroPhotovoltaic (AgroPV) is utilizing the unused space under a large scale of PV arrays for agricultural purpose. Therefore, the construction cost can be neglected or at a very minimum value due to existing infrastructure of PV farms. In AgroPV farm, PV arrays for electricity production are installed directly above crops covering. Consequently, PV facilities can protect the plants from the negative effects of the climate change such as droughts, storm, downpour and hail but this condition heavily depended on the crops sustainability and sun shading tolerance. However, the existing solar PV farms are not allowing intervention or disturbance any wiring, operation, structure or subsurface. Therefore, there will be difficulty of farming under PV arrays and caused a small scale production due to above restrictions.

INVENTION

The invention provides a simple, spacious, energy saving and cost effective retractable drying and planting rack in AgroPV farms for overcoming the drawbacks in the prior art.

MARKET POTENTIAL

- Solar PV Farm Operator
- Herbal Plantation
- Misai Kucing Tea Planters/ Manufacturers

ADVANTAGES

The installation of the Retractable Drying and Planting Rack for AgroPhotovoltaics Farm can provide the following benefits:

- **No additional cost for PV structure**
- **Monetary surplus for the unused land**
- **Low cost with high grade materials**
- **Easy installation and operation**
- **Green innovation with Nexus Integration**

The main advantages of the prototype is minimizing the hazards and problems especially when working under PV arrays (semi-confined working space) and could save time, energy, health risk and labor cost. By implying the concept of in-situ drying embedded underneath the PV array, the dissipated heat can be captured to accelerate drying process. The unit can be expanded and embedded directly underneath the Solar PV Modules which can ease the process of Planting, Pruning, Monitoring and Replanting without such constraints.

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