

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202641091110 A

(19) INDIA

(22) Date of filing of Application :27/07/2026

(43) Publication Date : 31/07/2026

(54) Title of the invention : SURYATHAMPU: SMART & PORTABLE SOLAR-ASSISTED CONTROLLED COOLING AND HYGIENIC FRUIT STORAGE SYSTEM FOR STREET

(51) International classification	:F25D 11/00, F25D 29/00, A23B 7/04, F25D 17/06, A01F 25/16	(71)Name of Applicant : 1)JSS ACADEMY OF HIGHER EDUCATION AND RESEARCH Address of Applicant :JSS Medical Institutions Campus Sri Shivarathreeswara Nagara Mysuru – 570 015 Karnataka INDIA Mysore Karnataka India (72)Name of Inventor : 1)Meghashree H. R. 2)Dr. Bhargav Shreevatsa Kadukothanahalli Sathyanarayana 3)Dr. Chandan Shivamallu 4)Dr. Shiva Prasad Kollur 5)Dr. Hemanjali A. M. 6)Dr. Narasimhamurthy Konappa 7)Dr. Roshan Akbarbasha 8)Dr. Rajarajeshwari R. 9)Dr. Poornima D. 10)Dr. Manjula A. C. 11)Dr. Anil Kumar K. M.
(31) Priority Document No	:NA	
(32) Priority Date	:NA	
(33) Name of priority country	:NA	
(86) International Application No	:	
Filing Date	:01/01/1900	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

SURYATHAMPU: SMART & PORTABLE SOLAR-ASSISTED CONTROLLED COOLING AND HYGIENIC FRUIT STORAGE SYSTEM FOR STREET VENDORS A portable fruit-storage system includes a wheel-supported thermally insulated chamber having polyurethane foam insulation, an aluminium inner lining, perforated fruit trays and a double-layer ultraviolet-filtered transparent acrylic lid. A photovoltaic panel, charge controller and rechargeable 12 V battery supply electrical power to a direct-current vapour-compression refrigeration subsystem having a compressor, condenser, expansion mechanism, evaporator, thermostat and circulation fans. The subsystem maintains a moderate fruit-storage temperature of approximately 15–20°C. Cooled air is circulated through an activated-carbon filter, a passive antimicrobial air filter and the perforated trays. A load-cell-based weighing subsystem includes an HX711 amplifier module, a microcontroller and a display and operates in a customer weighing mode and a total inventory-load monitoring mode. A keypad-operated digital lock and a manual override control access to the chamber. The refrigeration, airflow, weighing and access-control subsystems are powered through a common solar-battery electrical architecture. [FIG. 2]

No. of Pages : 29 No. of Claims : 10