**🛠️ Patent Title: Gardening Robot**

**📄 Patent Summary:**

This invention introduces a **lightweight, portable gardening robot** designed to automate key gardening tasks such as **ploughing, sowing seeds, watering, and trimming overgrown grass**. It is especially useful in large gardens or public parks where manual labor is scarce or time-consuming.

The robot:

* Uses a **mobile app-controlled interface** for automation.
* Performs **seed sowing and watering** in sequence using a **multimodal sensor-based watering mechanism** that detects soil dryness and waters only the required areas.
* Includes trimming functionality to maintain aesthetic appeal.
* Uses components like **Raspberry Pi**, **motor drivers**, **seed motors**, and **soil dryness sensors** to enable automation.
* Offers a **cost-effective solution** to reduce human effort in gardening.

**🧠 Key Innovations:**

* **Automatic seed sowing and watering** based on soil moisture detection.
* **Targeted irrigation** reduces water and energy waste.
* **Trimming mechanism** ensures garden cleanliness and maintenance.
* **Useful in labor shortages**, especially in large-scale public or institutional gardens.

**📜 Claims:**

1. A portable robot that sows seeds and waters automatically.
2. Operates effectively in the absence of human labor.
3. Uses a **multimodal watering technique** that conserves water and power by identifying dry zones precisely.