

ROVER DEVICE, SYSTEM, AND METHOD OF COLLECTING GARBAGE

Seeking parties interested in licensing and commercialization of technology.

Technology Brief

This technology provides an autonomous rover device, system, and method for automated garbage collection and waste sorting. Designed with a dual-frame structure comprising a running frame and a vertical frame, the rover utilizes a motor-driven gear and dual-chain mechanism equipped with sewer blades to sweep and scoop up litter. The system integrates onboard image sensors to locate waste and navigate autonomously—even during communication losses—alongside sorting sensors and an internal moveable triangle frame to categorize and evenly distribute collected garbage within its storage box. Connected via a central server to user devices, terrain sensors, and external surveillance pole cameras, the system dynamically validates coordinates and dispatches nearby rovers for real-time waste clearance.

Technical Applications

This technology is primarily applied in smart city municipal management, industrial plant maintenance, and public infrastructure sanitation. It is ideally suited for automated cleaning of urban parks, pedestrian streets, university campuses, beach promenades, and commercial facilities. Additionally, it can be deployed in drainage and canal perimeter clearance, airport tarmacs, and automated manufacturing complexes.

Salient Features

- ✓ Automated Chain-Blade Scooping Mechanism
- ✓ Smart Detection & Autonomous Navigation
- ✓ Integrated Sorting & Optimized Storage

Glimpse of the Technology



REFERENCE NUMBER

iTNT-TECH-0182



TECHNOLOGY SECTOR

Automobile, Auto-components & EV



IP STATUS

Patent Granted



APPLICATION NUMBER

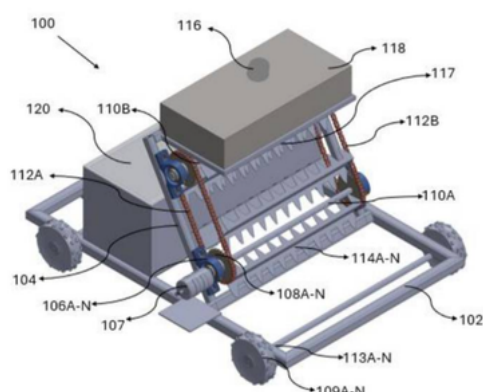
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TECHNOLOGY READINESS LEVEL

TRL 4

Block Diagram



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