10. Title: Waste Debris Collection Apparatus

Inventor: Prof. Amit K. Jain, Department of Electrical Engineering

Key Words: Waste collection, Cleaning apparatus, Cylindrical roller, Cylindrical brush

Domain: Environment

Summary: An apparatus for collection of waste debris using manual/automatic operation is developed. The apparatus is used to clean the streets littered with leaves fallen from trees and other waste items like paper plates, wrappers, disposable cups, etc. The waste debris is squeezed/crushed by a cylindrical roller and a cylindrical brush. The cylindrical roller picks the squeezed/crushed debris and transfers it to debris collecting apparatus. A dynamo is setup for power supply to operate the waste debris collecting apparatus. Further, the gap between the cylindrical roller and the cylindrical brush is adjustable as per the trash size and shape. The apparatus is light weight and simple to use.

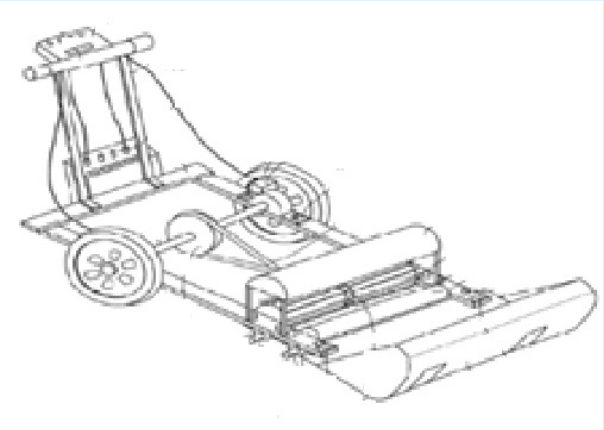

Diagram: schematic of waste debris collection apparatus

Advantages:

» Apparatus can be customized by choosing various cylindrical brushes and rollers to improve the intensity of the cleaning

» Maintenance cost is less compared to the existing available apparatus

Applications: Residential areas, healthcare facilities, town shopping centers, airports, public parks etc.

Scale of Development: A functional prototype is developed and its performance is evaluated by deploying at IIT Delhi.

Technology Readiness Level: 6

IP Status: Indian Patent Application 202011003629