



ANANYA VIDYALAYA MATRICULATION Hr. Sec. SCHOOL
IN ASSOCIATION WITH



IGNITED MIND EDUCATIONAL SERVICES

SOLID WASTE MANAGEMENT DUSTBIN VERSION 2.0

BY

KAVINANDHAN S

PRANESH S

RUPESH A.L

OVERVIEW

- Why we need?



- Effects- Environment & Humans

- Dustbin version 2.0



NEWS FEEDS

TAMIL NADU

Overflowing garbage bins, an eyesore in Fort City



Serena Josephine M.

VELLORE, JUNE 10, 2016 00:00 IST
UPDATED: OCTOBER 18, 2016 15:10 IST

SHARE ARTICLE



0 PRINT



Crying for attention: Many garbage bins like the ones in Arcot Road have not been cleared for some time now.— Photo: C. Venkatachalapathy

Residents complain of irregular clearance and poor sanitation

Overflowing garbage bins have become a common sight in a number of areas in the Fort City. Residents complain that the accumulated waste raises a stench, putting the locality in the grip of poor sanitation.

At Saidapet, which is one of the thickly populated localities in the heart of the city, residents and shopkeepers complain of poor sanitation due to irregular

COIMBATORE

Five years of Swachh Bharat Mission - a story of lost opportunity for Coimbatore



Karthik Madhavan

COIMBATORE, OCTOBER 09, 2019 00:26 IST
UPDATED: OCTOBER 09, 2019 00:26 IST

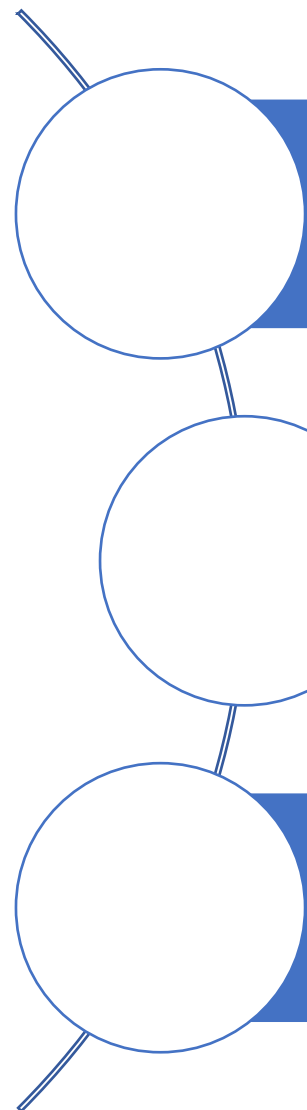
SHARE ARTICLE



1 PRINT



OBJECTIVE



To save the environment from waste accumulation and prevent the diseases spread because of waste thrown around the dustbin

To minimize the effort of garbage men and prevent them from contagious diseases which they might acquire when they are in direct contact with waste materials

To design a dustbin that holds the waste around it and also has a disinfectant that helps in deactivating the contagious

LITERATURE SURVEY

Smart waste management using Internet of Things

Smart Dustbin for economic growth

New Model for Smart Garbage Monitoring



Existing Smart Dustbins



IDEA PROPOSAL

**EVERY DESIGN ENCLOSED an ELECTRICAL COMPONENTS –
NEEDS PERIODIC MAINTANENCE**

**So, DECIDED TO INNOVATE PURELY MECHANICAL DESIGN,
WHICH WITHSTANDS HARD WEATHER & HANDLING**

WHY TO REPLACE EXISTING CORPORATION DUSTBIN



TIME TAKEN
TO DISPOSE A
DUSTBIN

Garbage Men –
Contagious and
Respiratory
Diseases

NO NEED OF
REGULAR
MAINTENANCE

Waste
Spilled/thrown,
Harmful to
trespassers

ENVIRONMENTAL
ISSUES, AIR
POLLUTION



PRODUCT COST

- CORPORATION DUSTBIN – Rs. 19,000/-
- DUSTBIN VERSION 2.0 - Rs. 19,000 +5000(Additional tong apparatus)
- TOTAL COST - Rs. 24,000/-
- The bin differs Rs. 5000/- only



TIMING MECHANISM

FLUID FRICTION
SLOTTED
WEIGHT

ENGINE OIL-
FRICTIONAL
LUBRICANT

POLISHED
SURFACE-ZERO
FRICTIONAL
SURFACE

TONG APPARATUS

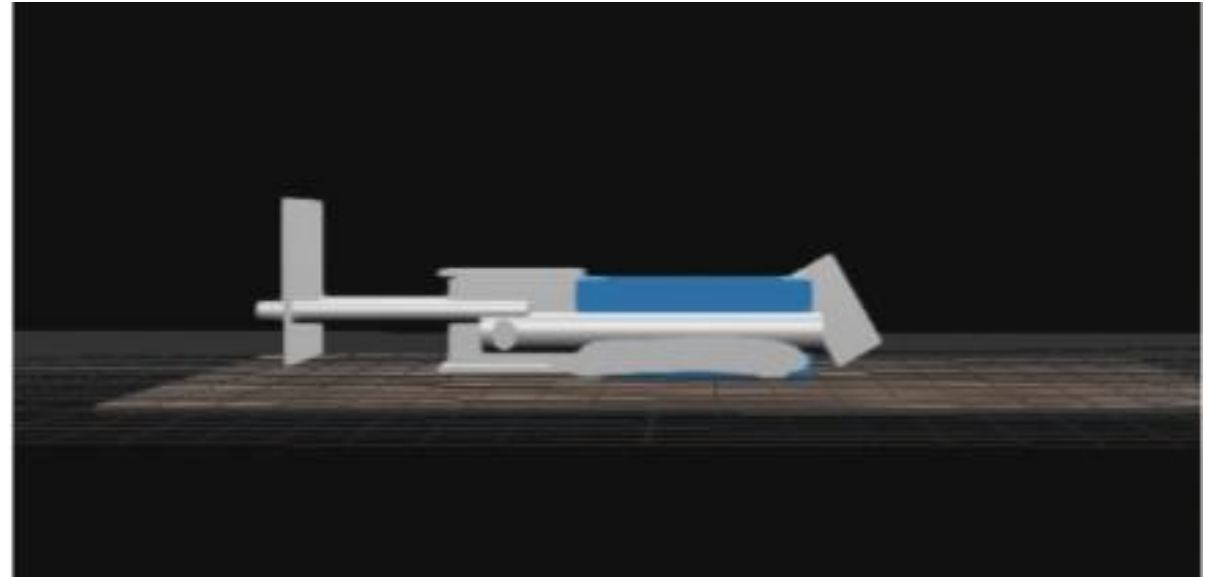
HOLDS THE
WASTE
ACCUMULATED
IN FRONT OF
DUSTBIN
RELEASED WHILE
THE BIN IS
RAISED AND
DUMPED INTO
VAN

SPRING

AT TIME WHEN
THE BIN IS
DUMPED INTO
THE VAN, SPRING
RETRIEVE BACK
THE WEIGHT



SOFTWARE DESIGN



FRAME DESIGN

Mechanical
Structure



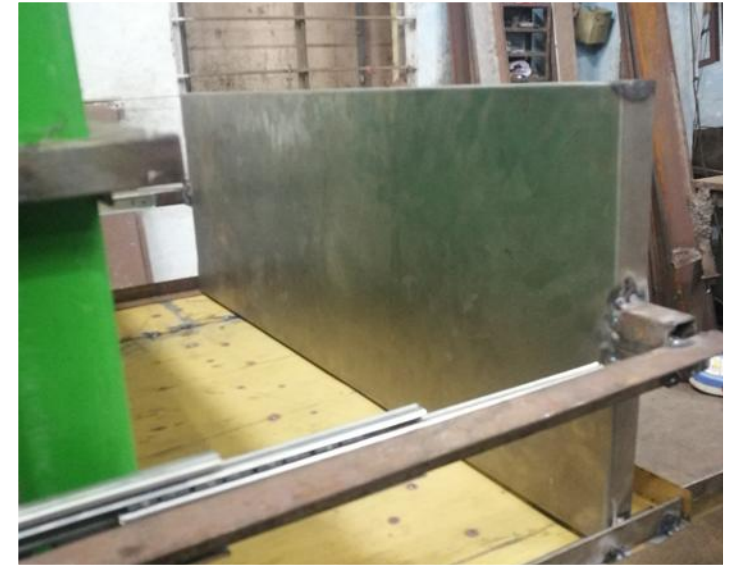
Front View



Side View



TONG APPARATUS



Pulley Assembly



Rack and Pinion



Slotted Weight-Frictional Surface



WORKING OF TONG APPARATUS



FUTURE DESIGN

WASTE ALL AROUND THE
DUSTBIN IS PULLED AND
COLLECTED

THANK YOU