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## Patent Search

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### Abstract:

A system (100) for automatic segregation of waste materials comprises a first movable tray (102) having one or more steps (104) to receive and carry waste materials; a filter tray (106) adjacent to the movable tray, the filter tray (106) having a plurality of holes and a container placed below the filter tray (106); a second movable tray (108) adjacent to tray (106) proximal to a primary segregation zone (110); a third movable tray (116) for biodegradable waste and a fourth movable tray (118) for non-biodegradable waste, connected with the second movable tray (108); a secondary segregation zone (112) and tertiary segregation zone (114) proximal to the third movable tray (116) and the fourth movable tray (118), respectively. Each of the secondary segregation zone (112) and the tertiary segregation zone (114) including respective push trays or arms (122) connected with a respective processing module.

**Complete Specification**

Embodiments of the present invention generally relate to technologies associated with management of waste, and more particularly to a system for automatic segregation of waste materials into multiple categories depending on a type of waste and their separate collection.

**BACKGROUND OF THE INVENTION**

Waste management is one of the most important aspect for every industry/sector in today's time. Most countries of the world have focussed their attention on managing the waste generated, thereby leading to a cleaner environment. Waste management generally involves different processes like collection, characterization, separation, treatment, and safe disposal of waste materials. Every process has its importance. Also, different kinds of waste material have different ways of safe disposals. For Example biodegradable waste such as organic waste can be used for composting, but non-biodegradable waste like plastic cannot be disposed in that manner. It may be recycled used for pyrolysis (common technique used to convert plastic waste into energy, in the form of solid, liquid and gaseous fuels).

So, considering the different modes of treatment and disposal for different waste materials, the initial processes of correct characterisation and separation/segregation of waste materials become even more important. Once these are segregated and separately collected, then each category may be directly sent for respective treatment and disposal.

At present there aren't many effective solutions available for such a segregation that can automatically identify/characterise waste into different categories. Many such systems employ manual labour to identify and separate particular type of waste materials in manual or semi-automatic systems. Apart from that, some of the presently available solutions aiming to identify and characterize the waste are not scalable on an industrial level. Another problem is that categories into which waste is divided are very limited. For example: some are only interested in separating plastic from the rest, some system aim to separate biodegradable and non-biodegradable waste only.

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