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**MEC299**

**DESIGN AND FABRICATION OF  
ALUMINIUM CAN AND PLASTIC  
BOTTLE CRUSHER**

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## **ABSTRACT**

The manual can crusher is the most popular type of can crusher that is used to crush various types of cans which need human effort for the crushing process. It is designed to be operated by hand for convenience while crushing cans. The issue is that can waste day by day is increasing, which will lead to the dumping of garbage at the garbage disposal center. Therefore, the objective of this project is to create a can crusher that will counter this problem which is making crushed cans into stackable piles for more conventional recycling. In addition, this machine not only crushes cans but also bottles, and there is a bottle opener as an advantage of this machine. This can crusher will be equipped with a hole for hanging on the wall that will allow for space savings and ease of use. The material that will be used in the fabrication process is stainless steel. Stainless steel adds strength and durability to products, as well as corrosion resistance. It also tends to have a long lifetime even when exposed to heavy usage for a longer period of time. In conclusion, this aluminium can and plastic bottle crusher machine will make life easier and the recycling haul much more convenient.

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## CHAPTER 1

### 1.0 Introduction

#### 1.1 Background of Study

A can crusher is a very useful tool for crushing cans that can be used not only at home but also in a variety of other places. It is used to crush empty, full, half-full, line rejects, or out-of-date aluminium, steel cans and bottle for easier recycling. A can crusher can help to save time and space. Using a can crusher to reduce waste capacity saves money on waste transportation. Can crushers are also useful tools for children and the elderly. Crushing with bare hands or feet may necessitate some force. It is much easier and more enjoyable to crush cans with a can crusher. To make this process more comfortable, most can crushers have a soft grip. A can crusher makes this process so simple that even a 5-year-old can crush aluminium cans without difficulty. This is an excellent way to introduce your children to environmentally friendly living and to teach them why aluminium recycling is important for them and the rest of the environment.

Most people have a can crusher in their kitchen. A can crusher is commonly regarded as a kitchen tool. Most of the kitchens have a garbage can, it is convenient to crush empty cans and throw them away. Aluminium cans are not only used to store liquids but also food, so when cooking something from a can, it can be immediately compressed by a crusher and thrown away. However, there are no real restrictions on where you can or cannot use a crusher. Many people install can crushers in the garages so cans can be compressed into plastic bags and stored in a convenient location in the garage. In addition, to using can crushers around the house, it is common practice to place them in various public places. Some of these places include schools, libraries, cinemas, smaller stores and shopping malls, and a variety of other places that a large number of people visit every day.

Furthermore, the most practical advantage of a can crusher is that it allows to save valuable space. This is possible because most devices can compress even the largest 12 or 16-ounce cans into 1-inch tall circles (depending on the type of can crusher). As a result, the full-size cans are reduced to small aluminium stubs that take up little space and are easily collected for