# UNIVERSITI TEKNOLOGI MARA 

## DESIGN AND FABRICATION OF CAN PRESSER

## MUHAMMAD HAQIMIE BIN MOHD NASRI

Dissertation submitted in partial fulfillment of the requirements for the degree of<br>Diploma<br>(Mechanical Engineering)

College of Engineering

Feb 2023


#### Abstract

Can presser is one of the tools that is being used to recycle plastic cans nowadays. However, these types of can presser can only crush one plastic can at a time. This will indeed affect the flow of work being put out by the workers that are using those can presser. The main objective for this project is to increase the efficiency of the can presser. The internet has been used as one of the research platforms in conducting this final year project. The outcome for this project is that it will help to reduce the operational time of the workers that are using this can presser.


## ACKNOWLEDGEMENT

First and foremost, I want to thank God for giving me the chance and opportunity to further my study after completing my "Sijil Pelajaran Malaysia" (SPM). I'm so blessed for having the opportunity to work with Dr. Sir Raja Muhammad Aslam Bin Raja Arif as my one and only supervisor. He is someone that I admire a lot.

Finally, this dissertation is devoted to my lovely parents, my father and my mother for their hard work in raising me and taking care of me since I was a kid. I will do my very best to make both of them proud at the end of the day.

## TABLE OF CONTENTS

Page
CONFIRMATION BY SUPERVISOR ..... ii
AUTHOR'S DECLARATION ..... iii
ABSTRACT ..... iv
ACKNOWLEDGEMENT ..... V
TABLE OF CONTENTS ..... vi
LIST OF TABLES ..... viii
LIST OF FIGURES ..... ix
LIST OF ABBREVIATIONS ..... x
CHAPTER ONE : INTRODUCTION ..... 1
1.1 Background of Study ..... 1
1.2 Problem Statement ..... 1
1.3 Objectives ..... 1
1.4 Scope of Study ..... 2
1.5 Significance of Study ..... 2
CHAPTER TWO : LITERATURE REVIEW ..... 3
2.1 Benchmarking/Comparison with Available Products ..... 3
2.2 Related Manufacturing Process ..... 5
2.3 Sustainability/Ergonomic Related Items ..... 5
2.4 Patent and Intellectual Properties ..... 5
2.5 Summary of Literature ..... 8
CHAPTER THREE : METHODOLOGY ..... 11
3.1 Overall Process Flow ..... 11
3.2 Detail Drawing ..... 12
3.3 Engineering Calculation and Analysis ..... 15
$3.4 \quad$ Bill of Materials ..... 16

## CHAPTER ONE

 INTRODUCTION
### 1.1 Background of Study

Plastic cans are one of the things that contribute to world pollution nowadays. The pollution is expected to increase as the year goes by if humans did not feel the urge to start to recycle it on a daily basis. Malaysian Recycling Empowerment Association has pointed out a statement that stated an act of recycling should be implemented in society. Thus, the project that is about to be conducted will help solve the issue of plastic cans pollution [1].

### 1.2 Problem Statement

Plastic cans are a thing that is being made on a large scale of number daily. The mass production of this product will eventually lead to world destruction if it is not being recycled every time it is being used up. The pollution caused by the plastic cans alone is enough to make the world become heavily polluted. Nowadays, each person uses at least two to three plastic cans in a week. If the amount of person that are using plastic cans increase by 100 persons, the number of plastic cans that are needed to be recycled daily will be very big. This will indeed increase the workload of the person who is in charge of recycling the plastic cans at the recycling centre. In conclusion, the need for these can presser to be fabricated is very important as it can help to reduce the workload of the person who is using this can presser because this can presser can crush three cans at one time thus making it the most efficient can presser nowadays.

### 1.3 Objectives

The main objectives of this project are:
a) To ease the workload of a person who is responsible for managing the recycled cans at the recycle centre.
b) To reduce operational time.

