UNIVERSITI TEKNOLOGI MARA

AUTOMATIC CLOTHES FOLDER

MOHAMMAD NOORIZAM BIN MAKMUR

Dissertation submitted in partial fulfillment of the requirements for the degree of **Diploma** (Mechanical Engineering)

College of Engineering

Feb 2023

ABSTRACT

Folding clothes has become a daily routine for everyone, especially to those who have family. With an increase in the number of family members, then the number of clothes also increases. It will make it difficult to fold clothes, especially for housewives. Folding clothes is also a priority in clothing stores as they have to fold the clothes in huge quantities to display it in their store. So, it will be difficult for them to fold with such a large amount. Folding Clothes Machine that exists are usually sold at very expensive price. So that, this Automatic Folding Clothes Machine is created. This product will go through a design selection process and is required to create an isometric view using state of-art SolidWorks 2019. As a result, this product may help people who have a problem in folding their clothes.

ACKNOWLEDGEMENT

Firstly, I am thankful to God the most gracious and the most merciful because give me a lot of strength and inspiration to do the project and write the dissertation. Without Him, I may not be able to do this project.

Secondly, I would like to thank my respected supervisor, Dr. Wan Muhammad Syahmi bin Wan Fauzi, whose always guide me during this project. He always corrects my mistakes and helps me to improve my project and dissertation.

Then, I would like to appreciate my parents because understand my current busyness during writing this project's report. They always come up with great ideas and suggest them to me. My father also helped me to choose the correct material to be used in my project.

Lastly, thank you to all my fellows for supporting and helping me with my project. They also help me to overcome the problem that occurs in my SolidWork.

TABLE OF CONTENTS

CONFIRMATION BY SUPERVISOR AUTHOR'S DECLARATION ABSTRACT ACKNOWLEDGEMENT TABLE OF CONTENTS LIST OF TABLES LIST OF FIGURES		ii iii iv v vi			
			viii		
			ix		
			LIST	Γ OF ABBREVIATIONS	xi
		CHA	APTER ONE : INTRODUCTION	1	
		1.1	Background of Study	1	
1.2	Problem Statement	2			
1.3	Objectives	2			
1.4	Scope of Study	2			
1.5	Significance of Study	3			
CHAPTER TWO : LITERATURE REVIEW		4			
2.1	Benchmarking/Comparison with Available Products	4			
2.2	Related Manufacturing Process	10			
2.3	Sustainability/Ergonomic Related Items	10			
2.4	Patent and Intellectual Properties	11			
2.5	Summary of Literature	13			
CHAPTER THREE : METHODOLOGY		14			
3.1	Overall Process Flow	14			
3.2	Detail Drawing	16			
3.3	Engineering Calculation and Analysis	20			
3.4	Bill of Materials	23			

CHAPTER ONE INTRODUCTION

1.1 Background of Study

Nowadays, house chores are not a priority for housewives. As time goes on, many housewives choose to work rather than doing house chores. It is because, with the higher cost of living, they have to work to support their family. So many of them are unable to do it alone. As a solution, they started to hire people to do their house chores. It may ease work but the problem of hiring people is, it requires high-cost maintenance. So, it is not an effective method to complete house chores.

There are many types of house chores and one of them is folding clothes. It has become a daily routine because people wear clothes every day. After washing their clothes, they will fold their clothes or hang them to avoid a mess. Folding clothes is not difficult, but it takes a lot of time.

So that, many laundries provide folding services. They will charge an expensive price for that service, and it will require a higher cost. That may not be the best solution to solve this problem. Next, people also come with folding boards. Folding boards can help people fold their clothes way faster than hand folding. Nowadays, this folding board is easy to find in online or local market. Anyway, folding boards require users to fold it manually. With that, it needs a lot of energy to do it. Next some companies have released folding clothes machines. Is more efficient because users just need to put their clothes on the machine, and their clothes will fold and arrange by themselves. But this machine is not suitable to use at home because of its size and the price is too expensive. It is usually used in clothing stores and laundry.

As a solution, a project named Automatic Clothes Folder has come. This machine just needs users to put their clothes on the machine then the clothes will fold by itself. It was also created with a small portable size. So, it does not need a lot of space to store it and it is not heavy. People also can get it at an affordable price, and it will solve their clothes folding problems.