

**SEPARABLE BIRDCAGE BY USING RECYCLE MATERIALS
(SOLID WOOD WASTE)**

AL-AIMAN BIN AL-AZMI

**Final Year Project Report Submitted in
Partial Fulfilment of the Requirements for the
Degree of Bachelor of Science (Hons.) Furniture Technology
in the Faculty of Applied Sciences
Universiti Teknologi MARA**

JULY 2018

ACKNOWLEDGEMENT

Assalamualaikum w.b.t

First of all I would like thanks to ALLAH S.W.T because of His blessing that this final year project is able to finish completely. This project would not have been complete without the guidance, help and information given by so many people.

Besides that, I would like to thanks to my advisor and co- supervisor, Dr. Nurul Husna binti Mohd Hassan and Miss Norashikin binti Kamarudin for the continuous support of my project, patience and guidance until I had complete my final year project. Both of them help me a lot in writing my thesis and also for my product. I could not have imagined have a better advisor for my Degree study. I also gratefully acknowledge their helpful suggestion.

Furthermore, this gratitude also should be given to all lecturers and staffs in the Wood Industry Department Uitm Teknologi MARA Pahang especially Dr. Shaikh for his comments during my viva presentation and also give a lot guidance during the proposal part. Thanks for the cooperation and concerns. Most sincere thanks to all my friends for their support and guidance in produce my product. Lastly, I would like to thanks to my beloved parents that always support me from beginning of my final year project until finished.

Finally, I want to apologize of all my wrong doing during making this final year project such if I had committed an offense to all parties involve whether direct or indirect.

TABLE OF CONTENT

	PAGE
APPROVAL SHEET	i
CANDIDATE' DECLARATION	ii
ACKNOWLEDGEMENT	iii
TABLE OF CONTENT	iv
LIST OF TABLES	vii
LIST OF FIGURES	viii
LIST OF PLATES	ix
ABSTRACT	x
ABSTRAK	xi
CHAPTER	
1.0 INRODUCTION	
1.1 Background of Study	1
1.2 Problem Statement	2
1.3 Justification	3
1.4 Objectives	3
2.0 LITERATURE REVIEW	
2.1 Furniture Industry in Malaysia	4
2.2 Wood Waste	5
2.2.1 Definition of Wood Waste	5
2.2.2 Sources of Wood Waste	5

2.2.3 Utilizations Options for Wood Wasted	7
2.3 Furniture Materials	8
2.3.1 Wire Spool	8
2.3.2 Solid Wood Waste	8
2.4 Separable Concept	9
2.5 Birdcage	10
2.6 Designing a Birdcage	11
2.7 Product Satisfaction Survey	12
2.8 Statistical Analysis	12

3.0 MATERIALS AND METHODS

3.1 Raw Materials Preparation	14
3.1.1 Wire Spool	14
3.1.2 Solid Wood Waste (off-cut)	14
3.1.3 Resin	15
3.1.4 Fastener and Connector	15
3.2 Product Design	16
3.2.1 Sketch	16
3.2.2 AutoCAD (3D Drawing)	17
3.2.3 Mock-up	18
3.3 Product Finishing	19
3.4 Customer Satisfaction Survey	20
3.5 Bill of Materials (BOM)	20
3.6 Part List	20

ABSTRACT

Nowadays, rapid growth of human population have placed tremendous pressure on vacant, green and open spaces in Malaysian cities. In the furniture manufacturing course, furniture that have eco-friendly criteria are most accepted to be developed. Furniture that is made by wood is highly recommended and demanded. Besides that, furniture that have saving space concept such as multifunction, separable, foldable and others unique concept tend to increasing the aesthetic value of that kind of furniture. Separable birdcage is a concept that allow to minimize space usage by have a unique characteristics such as can be used as single, separately and together. In addition, utilization of waste are included in green environment criteria. The objectives of this study are to produce and design separable birdcage by using recycle materials (solid wood waste). Furthermore, the purpose of this study are to used solid wood waste as the main raw materials for birdhouse production by using separable concept, produce an economical design for birdhouse and to clutch grasp the aesthetic value through product satisfaction survey. This separable birdcage by using recycle materials (solid wood waste) was produced and questionnaire was distributed to the correspondent in order to evaluate the product whether good or not. The result obtain from the survey and has been analysed. Overall, there was no significant differences obtain from the effect of different gender, age, profession and concept.