

## **DESIGN OF AN IRON NAIL HOLDER**


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**“I declared that this thesis is the result of my own work except the ideas and summaries which I have clarified their sources. The thesis has not been accepted for any degree and is not concurrently submitted in candidature of any degree.”**

Signed :   
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## **ABSTRACT**

This project is carried out to design a new concept of a product called the iron nail holder. Beginning with conceptual designs, the objective of this project is to design a product that can make the carpentry work become much easier and in addition it can reduce the chance of the person handling the carpentry work to get injured. The scope of the carpentry work in this project is only focused in the using of hammer and iron nails. The iron nail holder will function as a device to position and hold the nail that is going to be hammered. Part of this product also works to transfer the force struck by the hammer into zero chance of getting missed. A simple survey has been conducted to help with the improvement of the product. In addition, two 3D graphical software; Solidworks and CATIA were used to illustrate the designs as well as the modelling before the product is fabricated. Analysis has been done in order to obtain the detailed design and constraint of every single part of the product. The intended material to be used in the fabrication of this product is mild steel since it has more advantages compared to other materials. However, due to the limitation of time and complicated manufacturing process of the design, a Rapid Prototyping machine in the laboratory is used as an alternative, which was later fabricated with the use of nylon as the product's material. It will be used as a mock up to illustrate the physical looks of this nail holder. Last but not least, hopefully this project will not just be a success but it will also contribute as a useful invention in the world of design.

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