

1.1 INTRODUCTION

Protector design is the joining of metals of pipes of the same diameter. Sizes together in a compound pattern in order to give adequate protection to a place. Protection of life and property has been a great cause for alarm to people. It is because people do not want unwanted visitors into their homes. In order to remedy this situation, people concluded to use metal burglary proofs protector in their various homes, metal protections have gained wide acceptances in school factories, homes etc. They provide solid protection for windows and door and it also serves to decorate the building. This project will also use the theory, procedure and design analysis of the moral protector window.

1.2 AIMS

1. It aimed so much at enlightening students especially those in engineering field such as civil and mechanical engineering in areas of construction as regards to their profession.
2. It provides a workshop model of a true metal protector and economics of material, labour and procedures.
3. It also help the student to-be salt reliance hide pendent as well as even when they are out of school.

1.3 SCOPE

The scope of this project is to select the best materials draw and design and also construct it

CHAPTER TWO

2.1 LITERATURE REVIEW

Franklin D. Jones (2007) defines metal as solid materials that are typically hard, shinny, malleable, feasible, and ductile, with a good electrical and thermal conductivity: Some metals, forms barrier layer of oxide on their surfaces which cannot be penetrated by further oxygen molecules and they retain their shinny appearances and good conductivity for many decades e.g. Aluminum, Magnesium, and steels which are titanium.

Ranrah Shah (2002) defined metal as a substance that has a brighter luster and is good conductor of electricity. Metals have varying degree of hardness, density / malleability and ductility (being malleable) to be roll out and hammered. Ductility has to do with being drawn out into Wire. Porter Catherine (2011) also said that a metal has a definite melting point and will fuse with other metals to form alloys with the exception of mercury. All metals are solid at ordinary temperature.

Some metals are found in pure state, but most of them are found in combination with other elements these metals are in the form of sulphides, oxides, carbonates and silicate, usually mixed with rock and earthly materials. Some of the common metals found in combination ores are lead, zinc, iron, copper, chromium, nickel and mercury. Some metals are so rare hat tons of ore must be treated to get even a small amount of poured metal, radium is one of these. The

Properties those are undesirable. This why, most of the commonly used today are either alloys or compounds.

2.2 HISTORY

Between (1748- 1814) Joseph Bramah, son of a Yorksire farmer, was one of the fathers of the machine tool industry whose inventions greatly contributed to the development in stain borough, Yorkshire. England was from the family profession of farming to become a cabinetmaker; apprentice. After completing his apprenticeship, Bramah set up his own cabinet-making and carpentry shop in London. Joseph Gumming

had recently patented a water-close rote system which Bramah found satisfactory instating water closet for his customers from (1767-1778). In (1784) the Inventor Joseph Bramah patented his first burglar proof Bramah lock and he exhibited the installation in his Piccadilly shop window with a notice offering a two hundred guinea award to anyone who could pick it and dismount it after one hour, another very important Bramah invention was the *hydraulic press* of (1795). This was the first practical application of hydraulic principles and opened a tremendous new source of power to the manufacturers and builders of the Industrial Revolution.

Bramah was a marvelously inventive man who secured a total of 18 patents. His other inventions included a machine or numbering bank notes, a wood-planning machine, a device to soda-water machines. He paddle wheel. Brannah died in London In (1814).

The present invention has been accomplished to provide a burglarproof sash window which eliminates the aforesaid problems. According to one aspect of the present invention each sash of the sash protector, comprises a metal inner frame sandwiched in between two glass plate with a metal bars mounted on the inside that prohibit burglars from breaking in. According to another aspect of the present invention, a combination lock is installed in one sash so that the user can lock the sash protector without using a key. However according to another aspect of the present invention, a combination lock is installed in one sash so that the user can lock the window without using a key.

2.3 TYPES OF BURGLARY PROOF

There are various types of metal burglary proof depending on the instruction arid mode of installation, in Nigeria, four major types of sectors are in use, and these are:

1. Burglary proof with a door within it,
2. Collapsible burglary proof,
3. Totally removable burglary proof,
4. Suspended burglary proof.

1. Burglary Proof or Protector within It

In this type of burglary proof, the door is part of the Burglary proof.

This is constructed in such a way that it is locked from within.

2. Collapsible Burglary Proofs:

This is an adjustable type of protector in which the end is locked to the wall in two or three points with a distance of 0.5m from the door. When opened from the locked end, the burglary proof collapses on the wall to allow escape or exit.

The locked end may or may not be padlocked. .

3. Totally Removable Protector;

This is hung to the wall from inside the room with the hook, the same distance as in collapsible above (0.5m) from the end. The hooks are removed in case of emergency such as fire accident and the whole burglary proof is removed for exit or escape.

4. Suspended Protectors;

Suspended protectors like suspended ceilings are hung to protector asbestos, wooden and glass ceilings. They also serve to protect a building from unwanted visitors from entering through the ceiling. The suspended protectors like other protectors have, pins that enables them to be hinged to the wall.

THE DESIGN AND CONSTRUCTION OF BURGLARY PROOF

The complete project material is available and ready for download. All what you need to do is to order for the complete material. The price for the material is NGN 3,000.00.

Make payment via bank transfer to Bank: Guaranteed Trust Bank, Account name: Emi-Aware technology, Account Number: 0424875728

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Regards!!!