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UPCYCLED BICYCLE STOOL

Sonali Chopra[1]

[1]*Department of Product and Industrial Design, Lovely Professional University, Punjab*

ABSTRACT

The material's re-use / recycling are in the trend these days. An analysis of some applications is given to recycle the bicycle parts into a stool. This paper highlights the proposed method for raising awareness of the use of recycling and the use of bicycles as a means of transport rather than vehicles, due to the urbanization and the upcoming modern era a lot things are changing. In every field, recycling plays a crucial role. This paper is one example of how the bicycle's old part and the concept of using the bicycle can be combined together to make a stool and how this product can be used in Interior Design.

Keywords: Recycling, Stool, Bicycle, Pollution, Health

I. INTRODUCTION

Currently, the major problem that people are facing these days are pollution and unfit life. Due to the certain changes in lifestyle of people, they don't have much time for themselves. Because of this hectic schedule they don't prefer to exercise on daily basis and moreover the environment which is being polluted everyday makes it more difficult for live.

We produce an enormous waste of 1.25 billion tons each year that could fill the whole planet. The expecting value in increasing the waste is up to 3.12 billion by 2022 with ongoing rapid urbanization and population growth [1]. Expectation in growth of waste production is up to 26 billion tons annually by 2045, out of which one-third comes from Asia[2]. In most of the cases, before the furniture ends, fittings are replaced. One of the best alternative ways is to donate the equipment to use to a non-profit, charity or government entity.

WHAT IS RE-CYCLING?

"Re-cycling" is a method that uses the old material to make the new one again. Essentially, this process is done to reduce the raw materials used earlier will again be used to make new products[2][6][4]. This essentially will consume less energy and have more chance of reducing harmful emissions in the atmosphere as well. Because population is increasing day by day, this also means that a lot of old stuff is thrown away, so it is important to use the stuff that is thrown away because still it can be used.

Since, the population is increasing day by day so is the number of vehicles. Because of this pollution is rising at a tremendous rate and is damaging the environment and the health of the humans too. Therefore, to encourage the concept of using the bike as an alternative to motor vehicles as it does not contaminate the atmosphere as compared to them.

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WHY TO CHOOSE CYCLING:-

You need to be physically active if you want to be fit and healthy. Any physical activity on regular basis can protect us from various illnesses such as obesity, heart diseases, cancer, mental health, diabetes and increases blood circulation. Daily habit of cycling is one of the easiest ways to decrease the risk of problems related to heart because of our lifestyle.

Cycling can be done by the people of all ages, from kids to older adults, can enjoy. It is a healthy, less impactful exercise and it is convenient, inexpensive and environmentally friendly as well[3][8][9].

CYCLING AND SOME SPECIFIC ISSUES:-

i. CONTROLLING WEIGHT

Cycling is a great way of controlling and losing weight because it raises the metabolic rate, builds muscle and removes body fat. Cycling must be paired with a healthy eating schedule if we want to lose weight[5][7]. It is a gentle form of exercise in which time and pace can easily be adjusted–it can be built up slowly and modified to match you.

ii. CARDIOVASCULAR DISEASES

Cardiovascular diseases include stroke, heart attack and high blood pressure. Regular cycling stimulates and enhances our heart and lungs circulation, reduces the risk of heart disease[7].

Cycling provide strength to the muscles of our chest and reduces the levels of fat present in a blood. It is already proved that people uses cycling for work have three to four times less infected with pollution, thereby enhancing their lung function. A Irish study of 40,000 people aged 19 to 92 years over 14 years showed that daily habit of cycling protects people from many heart disease[7][8].

iii. MENTAL HEALTH

Regular bike riding can reduce mental health conditions such as depression, stress and anxiety. T his is because of the benefits of the workout itself and the enjoyment that a bicycle can offer[5][7][8].

II. OBJECTIVES

The main objectives of this project are

i. Encouraging people to use bicycle.
ii. To make the new products from the waste parts.
iii. To raise awareness of rising environmental pollution.
iv. To make people aware about the health issues which can resolved by using bicycle.

III. PROJECT DETAIL

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This bicycle stool is similar in shape and size to the other stool on the market, but its design and uniqueness are what makes it different from the others stools. This novelty in furniture is because it gives the impression that we are sitting on a bicycle. The key feature is that most the pieces will be used from the old bicycle parts only. The total height of the stool is approximately 24 inch and the diameter of the sitting area that is top is kept approximately 16 inch in diameter. Each part of the stool is connected with each other in such a way that it reminds of the bicycle only.

The seat is made up with the old tire rim with the spokes used a support for cushion. Below that a pipe is used to support the whole structure and to interlink it with each other. On this pipe there is a sprocket wheel with chain on it. This gives the main key feature of our theme to the stool, for the foot rest pedal with the crank arm is used. The base is a simple one because weight of the entire frame is held on that and it needs to be solid and steady.

Fig 1. Working Model of Stool

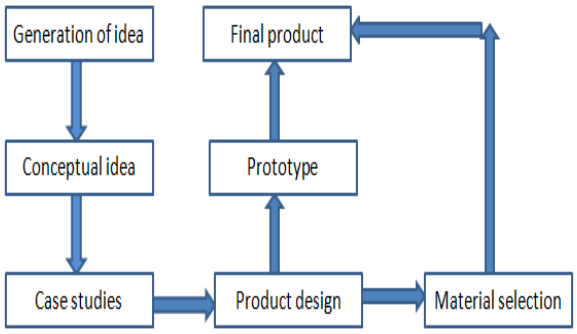

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Fig.2. Flow Chart of Concept Generation

IV. FURTHER EXPANSION:-

Another feature that can be applied to this furniture is that a power generating unit can be added to this stool, which can generate enough power to charge a mobile phone using pedal system since; the pedals are already installed in it[10][11]. By using the proper technique we can control the power supply which means no power fluctuations will be there and no harm will be done to the appliances (phones/laptops). Sitting on this stool will actually give imagination of sitting on a bicycle and this power generation system will add more spark to this project. Because the main agenda is to inspire people to use bicycle in daily routines[12].

V. CONCLUSION

By this furniture idea people will get encouraged to use bicycle in daily routine which will benefit both their health and a clean environment too. This design is also comfortable to sit on in the public area like bar, restaurants etc.

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