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A Garden Storage Trolley with Dried Leaves and Trash Collector

*Najibah Ab Latif, Muhamad Hasan Juzaila, Ainaa Maya Munira Ismail

College of Engineering, Mechanical Engineering, Universiti Teknologi MARA, Cawangan Johor, Kampus Pasir Gudang, Jalan Purnama, Bandar Seri Alam, 81750 Masai, Johor, Malaysia

*E-mail: najibahlatif@uitm.edu.my

ABSTRACT

A fabrication of a garden storage trolley with dried leaves and trash collector has designed in this project. The objective and main purpose is to reduce the burden of housewife or gardener bring the gardening tools while sweeping dried leaves when doing gardening or cleaning activities at their area. The add on dried leaves and trash collector make them easy and less energy used to collect the dried leaves and trash at a medium grass area. The partition and storage of gardening tools were fabricated using mild steel material. Some fabrication processes of the product like cutting, grinding, welding, finishing have done completely. Conclusion, it will help people especially gardener or housewife doing gardening or cleaning work with less energy used and user friendly.

Keywords: Garden; trolley; trash; collector

INTRODUCTION

Gardening is a good activity for body health. Gardening is one of a mental therapy and can be enjoyed by people of all ages. Gardening requires many different activities such as sweeping dried leaf, digging, watering plant, pruning and others. There are a lot of gardening tools such as, dried leaf collector, rake, shovel, cutter, wheelbarrow and others. Therefore, the right gardening tools will make the garden work easier.

There are many gardens trolley that are currently available in the market either made of metal or plastic [1,2]. This project proposed a garden storage trolley with a dried leaves & trash collector. The garden storage trolley with a dried leaves & trash collector will use mild steel material for the main frame, electrical components, and polyurethane cast wheels [3-5]. The main purpose of this product is to help the gardener to collect the dried leaf at moderate field area easier instead of using sweep manually while bring the other garden tools belong during their work [6]. The other gardening tools can be used when it needed.

Several fabrication methods were used to fabricate the product such as, cutting process, grinding process, assembly process, and welding processes [3,4].

The current available gardening trolley and dried leaves & trash collector in the market have a single function and specific task. Therefore, to have both function as garden storage trolley and dried leaves & trash collector will give advantage and user friendly to the user of this product.

Nowadays the age of the gardener or housewife range around 40-60 years old. With the old age factor, it will give them a hard time with their ability to do all the gardening 14 or

cleaning chores. Besides that, if gardening and cleaning are done manually especially in a moderate field area, it will spend a lot of energy and time. Therefore, this also will waste time for the workers. This is because user need to commute to grab their cleaning/gardening tools and put them back at the storage. This also will give hard time for workers who have joint problems because of old age factor. Therefore, the garden storage with a dried leaves collector has proposed to solve of the problem [7,8].

INNOVATION DEVELOPMENT

The development of innovation depends on the type of economic activity that is developed by the owner. Economic development and growth depend as much on social innovations as on technological advances. This type of trolley has adds on with the collector approached by gardener trolley which bring a lot of tools for gardening cleaning. Therefore, this new design has been proposed for make it easier while doing the gardening at the same time can collect the rubbish as well as dried leaves at medium area. A motor has been attached to the collector. It is manual power on off when it is needed. The prototypes of the product as presented below in Figure 1 and 2. The drawing and parts of the product features have shown in the Figure 3 and 4, respectively.



Figure 1: Isometric view



Figure 2: a) side view and b) front view

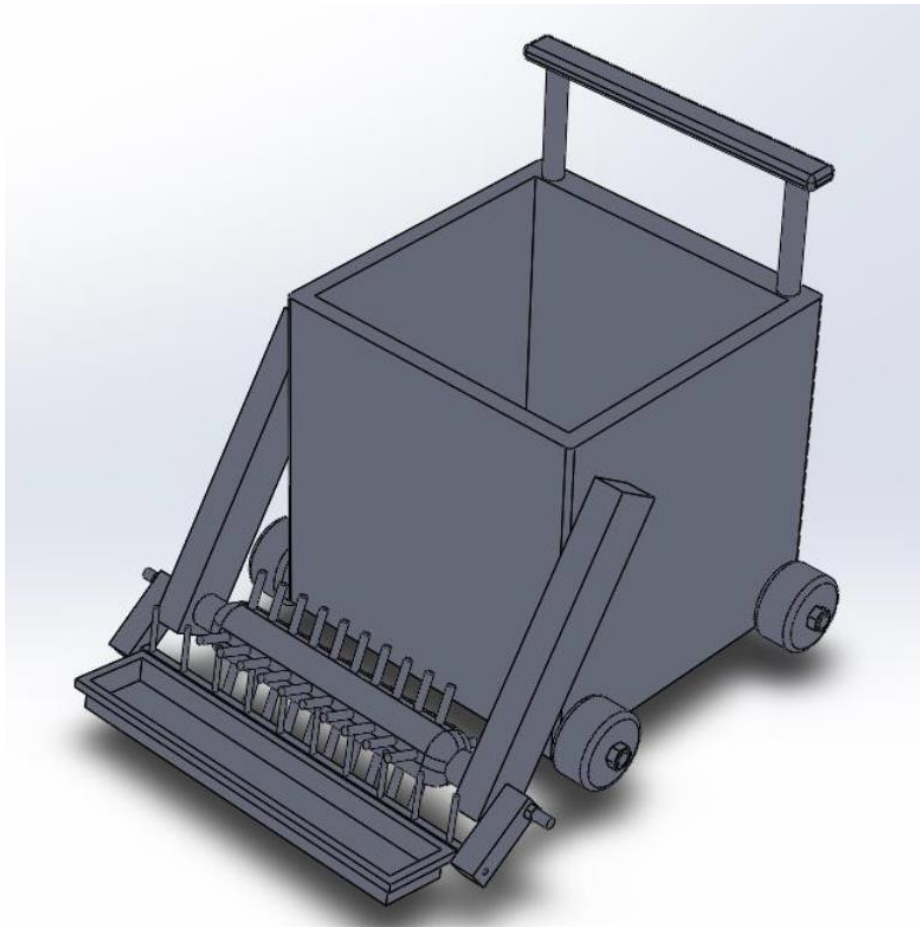


Figure 3: Drawing of the product using Solid work software

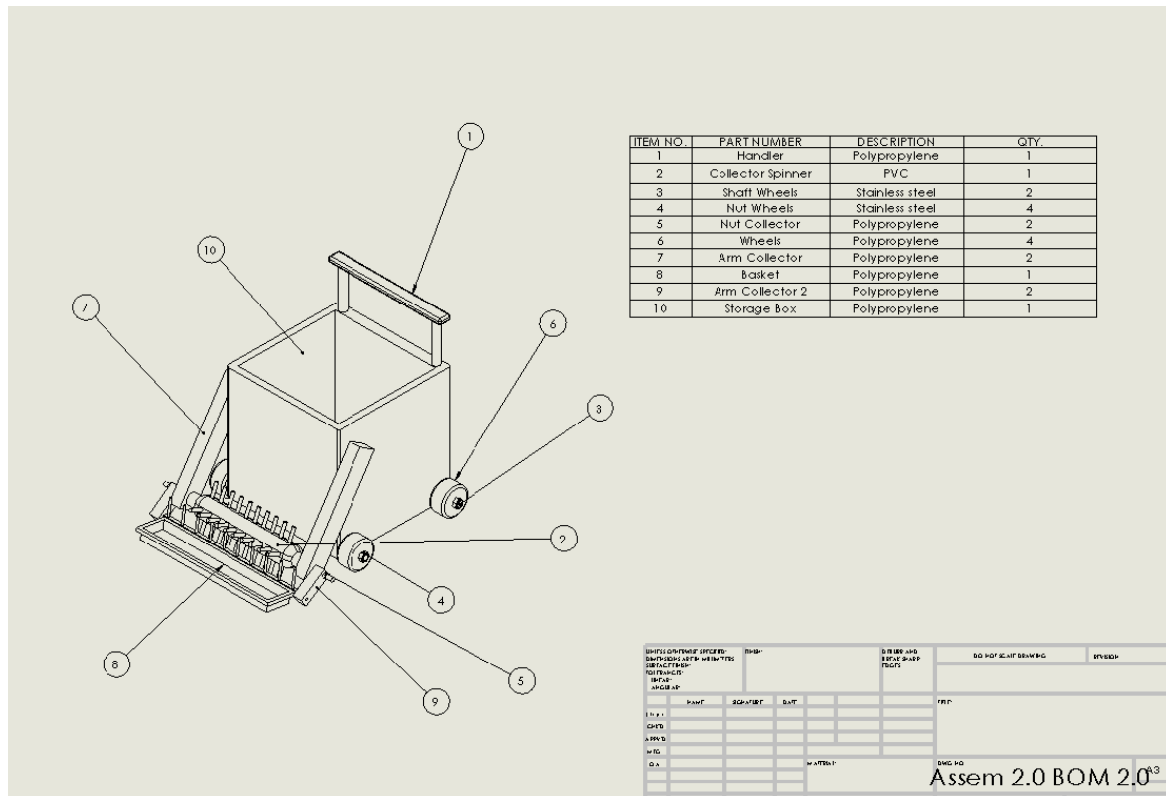


Figure 4: The features of the product

COMMERCIAL POTENTIAL

This gardening storage trolley with dried leaves & trash collector is a user-friendly product that can be used during gardening activities. It has a potential for commercialize as low-cost product. Moreover, the simplicity of the design can provide greater convenience or human life. This product will provide an important opportunity to advance the understanding of fabrication process and analysis of maximum load any other mechanical engineering mechanism related to product.

CONCLUSION

The fabrication of the Garden Storage Trolley with Dried Leaves and Trash Collector met the objectives. It helps people reduce their burden doing gardening and cleaning and save time while doing the work. The idea is to use less force while doing gardening or cleaning activities, thereby conserving the worker's energy. For the recommendation, the fabrication of collector of brush should be enhanced to be bigger size than the designing one for an effective dried leaves collector.

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