

SOCIALLY RELATED PROJECTS- MECHANICAL ENGINEERING

Fabrication of Portable Water Purifier using Renewable Energy

Developments in sustainable water purification technology have been driven by the growing need for drinkable, clean water on a global scale. In order to solve water scarcity and environmental problems, the goal of this project is to fabricate an environmentally conscious water purifier that incorporates renewable materials and energy sources.

The suggested water purifier is built with renewable resources, with an emphasis on using biodegradable and environmentally friendly materials to reduce its negative effects on the environment. The filtration system uses sustainable and natural materials that have been shown to purify water, offering a practical solution while lowering dependency on non-renewable resources. To power the water purification process, the project incorporates renewable energy sources. The energy-intensive operations of the purifier are powered by solar energy, a commonly available and sustainable resource that lowers the system's carbon footprint and increases energy efficiency. This method, which encourages the use of clean and renewable energy for water treatment, is in line with the concepts of sustainability.

The objective of the project is to develop a sustainable and reasonably priced prototype that is simple to duplicate and modify in a variety of geographic locations, particularly those with restricted access to traditional energy sources. The project's results in the development of environmentally friendly water filtration technologies that not only solve the urgent problem of poor water quality but also encourage responsibility for the environment. The suggested water purifier offers a comprehensive and environmentally beneficial solution for communities aiming to achieve long-term water sustainability by highlighting the use of renewable materials and energy sources.



Design and fabrication of multi oriented sprayer attachment for tractor

A sprayer is a device used to spray liquid manures, weed killers and pesticides in the agriculture fields, to maintain the crops and to get the high yield from which the high production can be achieved.

In early days the farmers were used to operate these sprayers to spray the pesticides and liquid manures. But it was taking the lot of time and effort, also because of the chemicals the farmers were facing lot of health issues. To overcome these problems many agro industries developed tractor operated spray machines to reduce the time consumption for the spray was and also to reduce the labor involvement. But the main disadvantage of these machines is the high cost.

In this project the design and fabrication of multi oriented sprayer attachment for tractor is fabricated which helps the farmers to spray the weed killers, liquid fertilizers and pesticides in horizontal and vertical directions effectively and efficiently, and this sprayer attachment is fabricated at low cost compared to other sprayers for tractor.



Design and Fabrication of Android Controlled Grass Cutter and Weedicide Spraying Machine

Grass cutter machines have become very prevalent currently. Most of the times, grass cutter machines are used for soft grass cutting. In a time where technology is integrating with environmental sentience, consumers are considering for ways to provide to the relief of their own carbon footprints. Pollution is man-made and can be seen in our own daily lives, more precisely in our own homes. Herein, we recommend a model of the Android grass cutting and weedicide spraying machine powered through battery.

Manual grass cutting and weedicide spraying requires man power, time and it may create non-uniform structure of grass height. Hence to avoid all these issues it is essential to create a system which can cut the grass with least skills. This research implements the grass cutting and weedicide spraying machine which has battery that can be charged by electricity. This machine can be operated using android phone. This system can be created with minimum cost as compared to other existing systems. This is rugged, durable and maintenance free. This system is pollution free due to the use of electrical energy to charge the battery.

