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Design and Fabrication of River Cleaning and Shrub Disposal Machine

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ABSTRACT: Our world has around 71% of water resource, through which all of them cannot be used since around 97% of the water are salty and found in oceans. Humans for their daily usage and drinking purposes, they rely on fresh water resources such as Rivers, lakes and ponds etc., Unfortunately our world has only around 3% of fresh water and most of them are polluted by plastic and garbage thrown in water resources. In addition to that plants grown on the surface of the water are also responsible for pollution of water. Our project RIVER CLEANING AND SHRUB DISOPSAL MACHINE mainly aims on resolving these issues which are great barriers of fresh water management. With the help of our project we can greatly manage fresh water and increase it's production throughout the country and throughout the world.

I. INTRODUCTION

Water is the most used resource in everyday's life. Through which fresh water is the mainly consumed by humans since, salt water cannot be used for any purposes. But due to several natural and manmade circumstances, water gets polluted and it need to be resolved for better production and recycling of available fresh water.This module can be efficiently used for removing agents which cause pollution to fresh water such as garbage, plastics, water grown shrubs etc.,

Our module will efficiently remove those agents with the use of cutting blades, robotic arm and conveyer belt system which are installed in our module. As planned, cleaning is efficiently done by the help of our major components – Rotating cutting blades, Conveyer system, Automatic Robotic arm. In this paper, we are going to discuss on various section as follows. Section 2 describes about the Literature Survey, section 3 Proposed System, section 4 comprises of the references used.

II. LITERATURE SURVEY

Nowadays human population became a greatest challenge for recycling and managing the available resources in our motherland. Since humans are major polluting agents of fresh water resources available on the Earth. Humans pollute water resources by means of throwing waste like plastic and garbage into water bodies, wastes from factories and other industries are allowed to mix with the fresh water sources. In addition to that natural barriers such as shrubs grown in the water surface causes the water current to stay stagnant in some crowded areas of garbage and plants.
These challenges will be resolved by our project. A new type of chemical salted corrosion free blades were used in our rotating blade system. This helps in aiding our module to work much longer than anticipated lifetime. Cutting is done over variety of plants which may vary in their biological composition and can cause chemical damage to the blades. To overcome that, we used special blades and this adds extra advantage to our module.

III. PROPOSED SYSTEM

This project "River cleaning machine" a machine that involves the removing the waste debris from water surface and safely dispose from the water body. The work has done staring at this scenario of our national rivers that square measure dump with large integer litres of waste and loaded with pollutants, poisonous materials, debris etc. The machine can elevate the waste surface dust from the water bodies, this may ultimately lead to reduction of pollution and last the aquatic animal's extinction to those issues are going to be reduced.

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Main aim of this project is to scale back the person power, time consumption for improvement the watercourse. During this project we've got store the energy within the battery and used this energy for watercourse improvement with the assistance of a motor and chain drive arrangement. Automation plays a crucial role in production. During this project we've got fictional the remote operated watercourse improvement machine. The main aim of this project is to scale back the person power, time consumption for improvement the water course. In this project we've got machine-controlled the operation of watercourse improvement with facilitate of a motor and chain drive arrangement.

a.BLOCKDIAGRAM OF PROPOSED SYSTEM:

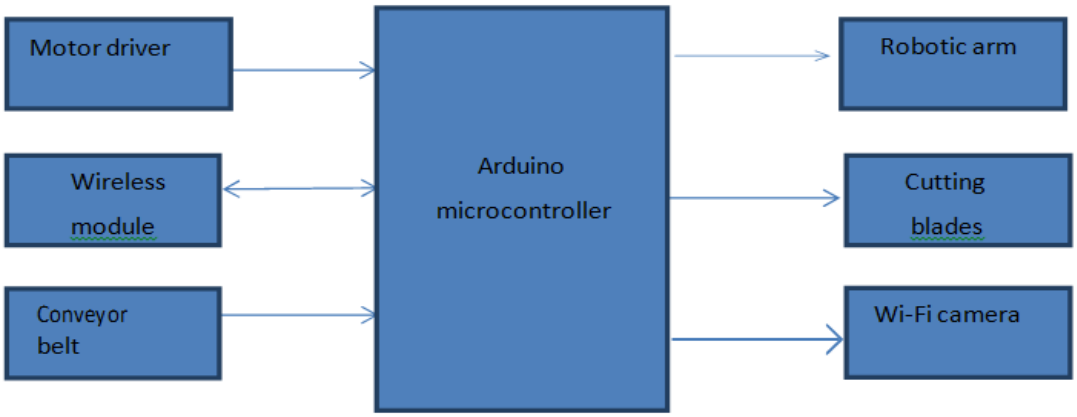

Fig. Block Diagram of Module

b.WORKING PRINCIPLE:

In this project, the waste debris floating over the surface are removed using the conveyer system. This is usually done by controlling the rover in the water surface using the controller through which the conveyer belt can be made to face towards the waste materials. This process picks the wastes from the water surface using the belt driven conveyer system.

The blades are main agents in removing the grown shrubs from the water surface. The rotating force made by the cutting blade motor helps the machine in providing enough torque to remove the grown shrubs from the water surface. The robotic arm attached will be used to remove the obstacles or any plants blocking the path of the rover. Or it may be used as a collecting agent for collecting wastes from the water bodies.

IV.CONCLUSION

In recent days, because of increased population the usage of fresh water became higher. So reuse and recycling of water should be made in order to effectively manage water resources and it's distribution to humans. Cleaning of water should be made in an effective way using our "River Cleaning Rover".

This also leads to effective cleaning of fresh water since, physical wastes on removing from fresh water before processing of drinking water greatly improves the production process. Thus chemical separation can be done in a easy manner after physical separation. Upon improving the module and making a better and bigger module will improve the process in a large scale.

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