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MANUALLY OPERATED FLOOR CLEANING MACHINE

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Abstract

There are certain limitations in floor cleaning machines which can be worked upon. For example cleaning machines are made with an aim to clean only dry surface of the floor. This means that they are only sufficient in the summer and winter season but not in rainy season this is the major issue for cleaning the floor surface but during the rainy season floor cleaning machines are required which can perform the tasks when the surface contain moisture or little amount of water on the surface of floor. So we are developing the machine which can work in both dry and wet conditions. This machine is called as wet floor cleaning machine.

Index Terms: Fully manual floor cleaning machine, wet cleaning, reduction in cost and efforts, non-electric, simple fabrication.

1. INTRODUCTION

Now a day the conventional floor cleaning machines are most widely used in airport platforms, railway platforms, hospitals, bus stands, malls and in many other commercial places. These devices need an electrical energy for its operation. In India, especially in summer, there is power crisis and most of the floor cleaning machine is not used effectively, particularly in bus stands. Hence there is a need to develop floor cleaning machine which operate without electricity. So that we developed such machine, which required only manual power to operate floor cleaning operation so that it can be an alternative for conventional floor cleaning machines.

2. CONSTRUCTION

The main parts required as follows,

1. Main Frame
2. Front & rear axels
3. Sprocket chain arrangement
4. Pulley Belt arrangement
5. Scrubber
6. Water tank

3. WORKING

In the pedal operated machine when operator start to pedalling the machine moves in forward direction, the power

is transmitted to rear axle with the help of chain drive. The larger pulley mounted on the rear axle when rear axle rotate pulley also rotates in same direction. After that the cross belt drive transmits power from large pulley to rear smaller pulley. The shaft on which smaller pulley is mounted also consist of scrubbers so that scrubber also start to rotate and cleaning operation perform.

4. LITERATURE REVIEW

Sandeep j. Meshram et al (2013) discovered the outline and manufacture of Tricycle worked road cleaning machine with the related hunt. At display we have few mechanized machines which are remote made and can be utilized as a part of our nation. This fundamentally prompts to thing for an elective component called Road cleaning process.

Manreet kaur (2014) discovered the “Design and fabrication of floor cleaner robot (manual and automatic) the author designed a robot to clean floor in both automatic mode as well as manual mode. His robot was equipped with sensors for obstacle detection, four motors and water pump .He concluded with convenience of dual mode operation of easy floor cleaning.

Preeti abrol et al (2015) discovered the Manual work is assumed control over the robot innovation and a significant number of the related robot machines are being utilized widely moreover. Here speaks to the innovation that proposed the working of robot for Floor cleaning. This floor cleaner robot can work in any of two modes i.e. "Programmed and Manual".

Manya jain et al (2016) discovered the project is used for domestic and industrial purpose to clean the surface automatically. When it is turned on, it sucks in the dust by moving all around the surface (floor or any other area) as it passes over it. In the modern era, the automatic floor cleaner is required. Thus, the cleaner is designed in such a way that it is capable of cleaning the area reducing the human effort just by starting the cleaning unit.

Akash nagtode (2017) discovered the "Solar operated floor cleaning machine. He had made a project on cleaning system based on solar power. For this he has used PV panel which convert particles of energy (photons) into electricity. He use this clean energy to power his cleaning machine".

Dr. J. Hameed hussian (2017) discovered the module of automatic floor cleaning machine by micro controller is run to clean the floor and sweeps the dust away. In this module a remote controlled car has gear motor is attached at front axis in between the front wheels , this motor is attached with a cleaning brush at front , and the gear motor is connected to 12volts battery and the remote car is attached with 9volts battery. The remote car is controlled by the micro controller.

5. CONCLUSION

The manual operate floor cleaning machine work totally on manual effort. It does not require any electric power crisis and increasing cost of automatic cleaner machine. We conclude to develop such machine which is cheap and does not required electricity.

Our floor cleaning machine also required less effort than manual hand floor cleaning operation and clean more space in same time such that it is also preferable over manual hand floor cleaning.

6. REFERENCES

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