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International Journal For Research in  
Applied Science and Engineering Technology



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# **INTERNATIONAL JOURNAL FOR RESEARCH**

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

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**Volume:** 10    **Issue:** IV    **Month of publication:** April 2022

**DOI:** <https://doi.org/10.22214/ijraset.2022.41361>

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# Review Paper of Pedal Power Washing Machine

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**Abstract:** Pedal Powered Clothes Washer is a low cost machine made up of easily and readily available scrap parts in daily life. It is a machine which generates power through human pedaling and with the drive mechanism, converts the pedaling motion into required rotary motion of the washing drum. Its innovation lies in its simple design, use of inexpensive parts, very low repairing and maintenance cost, affordability to each member of the society and it does not affect the environment. Our team intends to directly address the problems faced in washing clothes, and thus have developed a new design for easy effort in washing, rinsing and drying clothes. The Pedal Powered Clothes Washer is a completely new concept, which in its one laundry cycle does washing, rinsing and drying of clothes similar to that of an automatic washing machine available in the market.

## I. INTRODUCTION

Peddling washing machine is a very great innovation in its own. Peddling washing machine is specially made for the purpose of its utilization to wash the cloth by means of applying pedal. Today due to non renewable energy crisis its basic need to utilize the energy from other way or save the energy. This project includes the construction and utilization of the peddling washing machine which can with any amount of requirement.

The following pages in the report includes about the constructions of peddling washing machine, its raw material, its working, benefits of the peddling washing machine with respect to actual electronics washing machine save the time, water, electricity and not very expensive. Its main expect is exercises with applying the pedal to wash the cloth.

Cloth washing is one of the essential parts of the life but it is considered undesirable because of the involvement of efforts, time, energy and cost. Now a days a wide variety of washing machines are available in the market and there is a tough competence among the manufacturers. The cost of washing machine varying from Rs.10,000 to 1,50,000 depending upon features and capabilities.

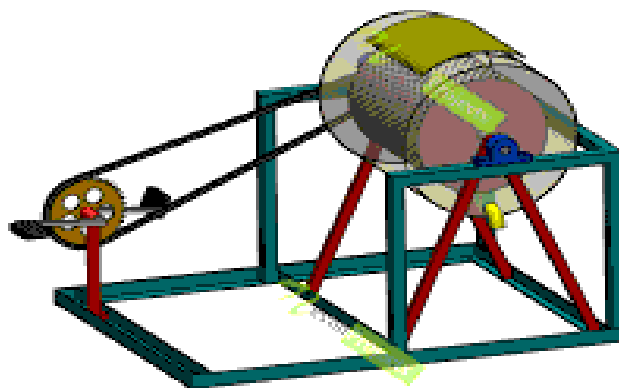
## II. METHODOLOGY

To achieve the work within a time period, this work categories into methodology, data collection procedure and its analysis in three sections.

First section describes the methodology used to study the details of types of various existing washing machine.

The second section presents the detail location of data collection, data collection procedure & the smoothing technique used for fabrication of modified pedal power washing machine .

Find out the new advance technologies for fabrication of require unique washing machine .



### III. WORKING PRINCIPLE

A washing machine has become a vital household item that most people simply cannot do without these days. For one, it is designed to make washing clothes a lot easier. If you have already tried washing your clothes by hand, then you'll certainly understand what it means not to have this appliance with you.

A washing machine is a pretty straightforward piece of contraption which can be run by practically anybody. It is designed to remove dirt and stains from your clothes and make them suitable for wearing again. The machine moves the clothes about in soap suds and spins them around to separate water later on. One thing that you should understand about how washing machines work is that these contraptions are actually made of two drums instead of one. The inner drum works to let water in and out to spin your clothes and clean them and has a lot of small holes on it for that purpose. The bigger drum, that you really don't see works to hold water while the inner one works on spinning your clothes around.

### IV. ADVANTAGES

- A. Uses less water, power, and soap
- B. Cleans as well as commercial washer with similar capacity
- C. Spin dries so no wringing needed
- D. Comfortable to use
- E. Enables women to do more rewarding things
- F. Technology for women
- G. Community investment that also benefits the poor
- H. Sustainable with local production and maintenance
- I. Replicable anywhere with bicycles
- J. Save the water.
- K. It is a non-polluting, as well as not using any types of electricity.
- L. Also we get the advantage of exercises with washing the cloth by means of applying the pedal.

### V. DISADVANTAGES

The washing machine needs detergent, and water. This means an increase of consumption and expenses in your house. If you are about to buy a washing machine, you should bear these items in mind as future expenses and analyze your economic possibilities. The washing machine occupies too much space. If you generally change spaces or live in small apartments, having a washing machine will be a disadvantage for you to move around and for the machine too

### VI. APPLICATION

- A. It is very useful into the local rural areas.
- B. Saving in detergent and the water
- C. Scale free tub
- D. Reduced traces of detergent on clothes
- E. Better wash quality
- F. Softer clothes
- G. Easy to operate and the less effect of chemical on the women hand.
- H. Exercise is also done with the applying the pedal.

### REFERENCES

- [1] S.M.Moghe & K.S.Zakiuddin (2013) "Design and Development of Turmeric Polishing Machine Energized by Human Power Flywheel Motor."-A past review, Proceedings of the 1<sup>st</sup> International and 16<sup>th</sup> National Conference on Machines and Mechanisms IIT Roorkee, India, Dec 18-20 2013
- [2] Bicilavadora: The Pedal-Powered Washing Machine - IDEAS 2005 Proposal.
- [3] Bruzzone, M. & Wieler, A. (2010) "Reflecting on an Intercultural Design-Build Project in the Kathmandu Valley" Final Draft, February 5, 2010.
- [4] [http://en.wikipedia.org/washing\\_mc/pedal-powered-washing-machine.htm](http://en.wikipedia.org/washing_mc/pedal-powered-washing-machine.htm)
- [5] [http://en.wikipedia.org/wiki/Washing machine](http://en.wikipedia.org/wiki/Washing_machine).
- [6] <http://www.ideafinder.com/history/inventions/washmachine.htm>
- [7] <http://home.howstuffworks.com/washer1.htm>
- [8] [http://www.apparelsearch.com/definitions/miscellaneous/washing\\_machine.htm](http://www.apparelsearch.com/definitions/miscellaneous/washing_machine.htm)



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