



## LEG OPERATED RECIPROCATING WASHING HANDS DISPENSER FOR RURAL

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### ABSTRACT

Rural People have been changing their habits to reduce the viruses effect on them, Mainly virus is being entered through the hands, nose, eyes or mouth and without maintaining social distance in crowds. In general human being hands touches their noses 2000 times in a day study revealed by the research group, avoid hands touching nose eyes and mouth other wise hands touch on surfaces can pickup viruses, once contaminated hands can transfer the virus to eyes, nose, or mouth from there the virus can enter to body and get infected. So human beings reduce the hand operations in daily activities, unless reduced the hand operations the COVID-19 and other diseases also increases rapidly. W.H.O (World Health Organisation) has released some small precautions 1) Wash hands thoroughly with soap and water or use alcohol based sanitizer (Washing hands with soap and water against COVID-19 effective) 2) Maintain 1 meter physical distance 3) Wear a mask (house made reusable mask). Here leg operated systems developed instead of hand using operations in daily activities for reducing virus infection. Hence low cost affordable "Reciprocating leg operated washing hands dispenser" has been designed and developed. It has been examined effectively. In addition drinking water can also collect from the system without using hands.

Key words: Viruses, Hands, Legs, Water, Human, Covid-19 and Reciprocating

### 1. Introduction

Rural areas still more than 50% of the people following unethical methods educated people need to educate them. Several hand touching avoid equipments developed under additive technologies, 3D printing plays a major role for making different facial masks and lever based products for pushing and pulling the doors and windows etc., Developed countries like Japan, Korea, Singapore, and Europe etc taking precautions to prevent the diseases educate the people to avoid hand touches on surfaces and developing IOT based products for their people. But under developed countries like India, South Africa and South Asian countries etc., unable to afford IOT based products. Author has designed low cost affordable products for the poor.

### 2. Motivation

To reduce the impact of COVID-19 and other diseases on human beings, leg operated equipment have been developing instead of hand operations in daily activities, hand touching on surfaces is one of the reason increasing virus in to human body. The aim of the product to reduce the hand touches on surfaces.

### 3. Results and Discussions

Human touch is as important as cleaning human hands to reduce the virus entering in to human body, an innovative way in new directions developed "Leg Operated Washing hands Dispenser" for reducing the hand operations in daily activities with affordable cost. Due to COVID-19 New directions enter in to the lifestyle for reducing pandemic impact.

Reciprocating Leg operated washing hands dispenser made up of with 20 liter capacity water bottle joined together with reciprocating pump fitted on the top of the bottle and rectangular iron frame made it with the help of welding, placed on the pump shown in fig.1. working with reciprocating

motion principle by through up and down motion of leg, then water comes from the bottle without using hands. Ortho graphical representations of front and top views are shown in fig.3 and 4. Lever operated drinking water system is shown in fig.2 with the help of elbow press down the lever tap will open after taking required water leave the lever it will come up hands touching is reduced, Here cups placed in one box and dustbin also arranged adjacent of the drinking Water system. This is another new direction reducing the touching hands. Do,s and Don't ,s are shown in fig.4 and 5 reducing the viruses



Fig.1. Reciprocating Leg Operated Washing hands Dispenser Fig.2. Drinking Water System

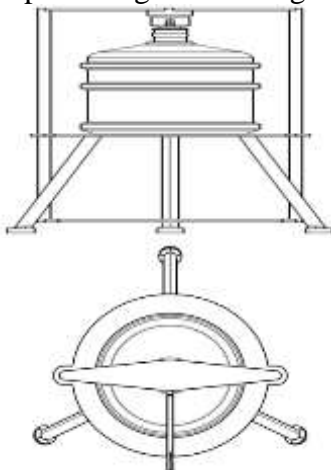


Fig.3. Front view and Top view

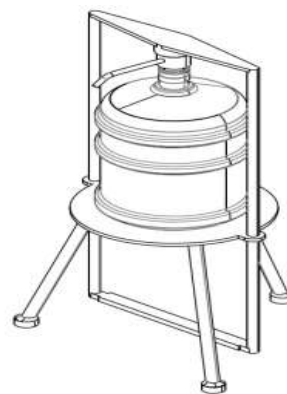


Fig.4. Isometric view



Fig.5. Do,s



Fig.5. Don't ,s

#### IV Conclusions

- 1) Low-cost and affordable item for the poor
- 2) Easy to understand the technology
- 3) Hand touches reduced on surface
- 4) Reciprocating Leg operated Washing hands Dispenser can reduce the hand touches
- 5) Drinking water system can reduce the hand touches



- 6) Due to COVID-19 New directions enter in to the lifestyle for reducing pandemic impact.

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