COVID-19 (Solution Challenge)

PARTICIPANT NAME: Varnit Goswami (India) **IDEA** - HANDSFREE BASIN

DESCRIPTION

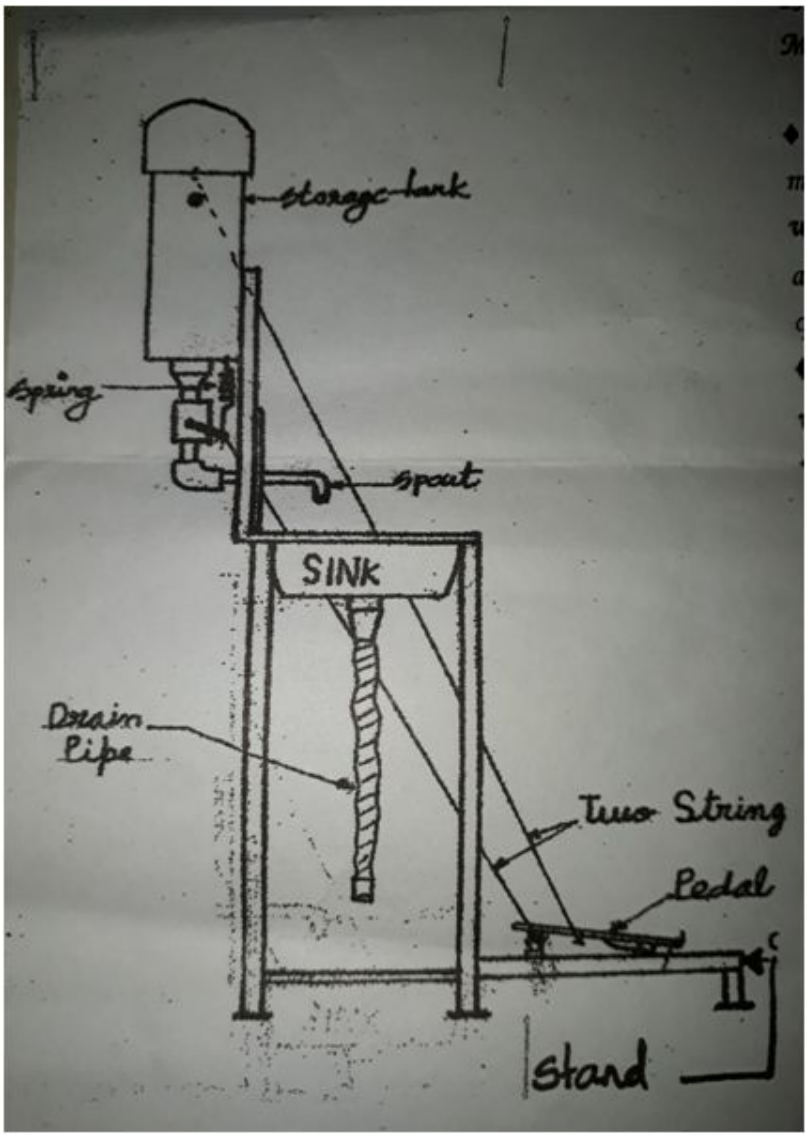
Coronavirus disease 2019 (COVID-19) is an infectious disease caused by the virus strain "severe acute respiratory syndrome coronavirus 2" (SARS-CoV-2). The disease was first identified in 2019 in Wuhan, China, and has since spread globally, resulting in the 2019–20 coronavirus pandemic. Recommended measures to prevent infection include **frequent hand washing**, maintaining distance from others (social distancing), and keeping hands away from the face.

When we are at home wash their hands is easy but when you are in some public spaces this would be **not possible**. Second, while washing their hands for 20 seconds is not that means you have to wastewater otherwise, the whole world again fights for drinking water due to the **water crisis**.

After analyzing these two problems, I have designed a solution for this, **Handsfree Basin** for public spaces. There is a spout with a basin that is controlled by a pedal through spring and wire (which controls the flow of water by pressing through the foot). Now, everyone washes their hands without touching the tap (means restricted the transmission of the Coronavirus through the surface) and reduce wastage of water.

OUR TECHNOLOGY

- In this design, I am introducing a foot pedal to manage water in the storage tank and stop transmission of the Coronavirus through the surface & stop water wastage, generally seen in public spaces (where taps are usually left open after usage, leading to wastage of water).
- This pedal controls both the bibcock, as well as the water coming out of the storage tank for usage.
- The storage tank is supplied with water from the municipal corporation connections.
- Once the pedestal is pushed down the pedal, the bibcock stops further water supply into the storage tank.
- At the same time a spring attached to the supply line, lets the water flow out of the storage tank simultaneously.
- In this way, the foot pedal can not be tampered with for eg. by the placement of brick for excessive water outflow.
- Hence water supply is controlled and comes out only when the foot pedal is pressed.


storage tank
Spring
spout
SINK
Drain Pipe
Two String
Pedal
Stand

EFFORTS AND COST OF IMPLEMENTATION

- Efforts: Person Hours - 1 person * 10(5 hours * 2days * 1week) = 10 hours (including Welder and plumber work)
- Cost: INR 2500 including GST (in bulk, it will be cheaper)

APPLICATION OF OUR SOLUTION

In this way, the transmission of CronaVirus restricted from infected to healthy people (because not touching the surface) and, second, wastage of water is managed in a simple and effective manner.

ADVANTAGES

- This is movable, strong, easy to carry and needs only water supply.
- It would be cheaper than any high tech taps or sensor when to use in bulk.
- Low maintenance cost and required quarterly.
- The model has a simple construction procedure.