FABRICATION AND TESTING OF SEMIAUTOMATIC COMMODE CLEANER HAVING FLEXIBLE SHAFT

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Introduction:
Sanitation is the mainstay for the sustainability of modern civilisations. Over the years as the civilisations progressed the need for sanitation was realised. Human habitats necessitate the need for toilets.

Toilets, commodes and wash basins are the most basic sanitary ware. Be it big shopping malls or small market places, schools or universities, places of worship and courts, jails, offices, railway stations, bus stations, highways – infact, every place needs a toilet. Having assumed very special important position in humans’ life, toilets need to be maintained dialy, if not very frequently.

Cleaning Toilet is a considered a menial/low esteem job. It is becoming very hard to find service provider or individuals to do this job and nobody wants to do it. However it is very important to keep the toilets neat and clean. Dirty toilets and wash basins are breeding places for harmful germs and bacteria. The stench emanating from toilets is unpleasant and unwelcome and they also smell and look bad making people uncomfortable.

A very large portion of Indian population both rural and urban (mostly slum dwellers) don’t have access to clean toilets hence they are forced to defecate in open which is being curbed by encouraging people to have their own personal toilets.

Present washroom cleaning practices:
Presently washroom cleaning is done manually by available washroom cleaning brushes using acids or other liquids available in the market which is cumbersome and takes more time.
Need for development of this utility:

The manpower available for providing janitorial services is very scarce. Even though the job of cleaning toilets is least preferred profession by humans and also the most hated but it is most necessary. Nobody likes to clean human excreta be it in public places or households.

Over the years, governments have realized the problem of open defecation in the rural parts of India and initiated several programmes to promote the use of household and public toilet spaces. With the increase in number of toilets, their cleanliness and maintenance is also an issue because nobody wants to use dirty and unhygienic toilets. Therefore, a mechanized or semi-automatic washroom utility is the need of the hour for a country like ours.

Such mechanized toilet utilities enable fast and efficient cleaning of toilets and washbasins and also make it easy, hygienic, and safe for the janitors to do their job.

Scope of the work:
The scope of the present work is:

- Fabrication and testing of semi-automatic commode cleaner having flexible shaft.
- To evaluate the performance of the fabricated model.
- To train the janitorial service providers of our college for acquainting them with the developed model and teach them how to use it.
- To take the opinion and suggestions for further improvement.

Work carried so far:

Two models of commode cleaning device having flexible shaft have been fabricated. One of the models utilizes D.C. power with charging facility. It can also have A.C. inputs and solar power back up. The second model utilizes power directly from A.C. mains.

Results:

The two developed models have been made to clean the washbasins, gents urinal pots, Indian and western commodes in toilets of our Institute and hostel.

Photos of utility developed
Figure 1: Semi automatic commode cleaner with flexible shaft utilising DC power

Figure 2: Semi automatic commode cleaner having flexible shaft utilising AC power