Implementation of Automatic Indo-Western Commode

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Abstract:
In today's busy life, It becomes very difficult for persons suffering from arthritis, back pain, knee pain etc. to use an Indian style commode. Due to this reason, they are left with option than using the western commode. But in metro-cities like Mumbai, Delhi, Pune, etc. using two separate toilet is not feasible this inspires us to do work in this direction. In the purpose work, we are developing a new product prototype to cater the needs of people, who are using Indian as well as western commode this model is helpful for the elderly peoples as well as patients. The proposed model is called as automatic indo-western commode, and it will be implemented using microcontroller and IR sensor. This model will also facilitate the auto flush operation for automatic cleaning of the commode with optimal water. The main feature of this model is the height adjustment i.e. low, middle and high level height adjustments for different kind of person.

Keywords: arthritis, indian, western; formatting; style; styling; insert (key words)

I. INTRODUCTION

Due to modern lifestyle, most of the Indian population is suffering from diseases like arthritis, back pain, knee pain etc. specially western commode is increasing day by day. Since most of the population is not comfortable with western commode. They also need Indian style commode .but in metro cities like Mumbai, Pune, Delhi etc. where space is big problem. One cannot imagine about two separate toilet. This give us inspiration to work in this direction.

The idea is to develop an indo western commode, which will cater the needs of the people. Suffering from above mentioned issues.The proposed model is to develop an automatic indo-western commodethe said commode will be operated as Indian as well as western commode the said commode will be operated as Indian as well as western commode. This model will be automatically converted to Indian style to western style and vice versa using a single switch.

The automation will be implemented using microcontroller and IR sensor. There shall be height adjustment for the commode according to the type of user there level of height adjustment will be possible i.e. low, medium, and high along with this automatic flush will also be incorporate in order to clean the commode with optional usage of water.

II. OBJECTIVE

- *Comfortable for arthritis,back pain petients and old age person..*
- *To use less amount of water for flushing perpose..*
- *Height adjustable(low, medium,high).*

III. METHODOLOGY

The implantation of automatic indo-western commode is proposed with automatic action of conversion of commode with the help of dc motor. The fabrication has been done by welding process.

Block diagram
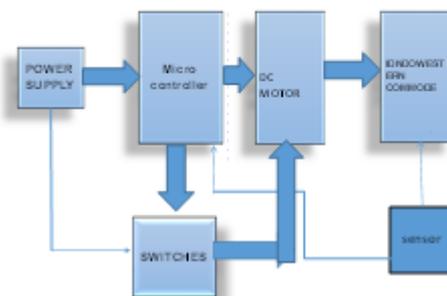
IV. DESIGN OF AUFS

The design of automatic indo-western commode is made of following list of components.

- Resistors: 1KO, 330O, 100KO, 10O, 10KO
- Ceramic Capacitors: 0.033uF, 0.01uF, 0.047uF
- IC 7805   voltage regulator
- Atmel 89C2051 microcontroller
- DC Motor
- Sensor
- Power supply
- Fabricated metal

V.WORKPLAN

Block diagram of indo-western commode is shown in above figure. In this module we are using a combination of indo-western commode. For this module we are using microcontroller, dc motor, sensor, switches power supply and indo-western module.

Microcontroller:
In this module we are using microcontroller is ATMEL89c2051 which is used for programming the dc motor (for height adjustment). Microcontroller is also used for automatic flush system.

Dc motor:

Dc motor is used for converting the Indian commode into western commode by adjusting the seat of module i.e. (high, middle, low). Dc motor is interface with microcontroller. If microcontroller detects 1 then motor rotates clockwise direction and move upward direction and it is converted into Western commode. If microcontroller detects 0 then motor rotates anticlockwise direction and moves downward direction and it is converted into Indian commode.

Sensor:

Here we are using infrared (IR) sensor for detecting presence of person. In manual flush system, user presses a button, which opens a flush valve allowing mains-pressure water to flow into the bowl, or sometimes the user presses directly a flush level (a handle connected to flush meter). Today, manual flush system have been replace with a sensor-operated system that automatically flushes the fixture when the user departs. The microcontroller-based automatic flush system presented here uses an infrared sensor to detect a user approaching the fixture, then it waits until the user departs. The flush system is fully controlled by a microcontroller. It also flushes before the person departs if the person is present for more than the Preset time (more than 5 minutes).

Switches:

Switches are pressed by user then microcontroller program the dc motor according to the switch pressed (either 1 or 0) and convert the commode suitable for user.

VI. ADVANTAGES

• Makes elimination faster, easier and more complete.

• Protects the nerves that control the prostate, bladder and uterus from becoming stretched and damaged.

• Securely seals the ileocecal valve, between the colon and the small intestine. In the conventional sitting position, this valve is unsupported and often leaks during evacuation, contaminating the small intestine.

• Relaxes the puborectalis muscle which normally chokes the rectum in order to maintain continence.

• A highly effective, non-invasive treatment for haemorrhoids, as shown by published clinical research.

VII. APPLICATIONS

• Used in Railway, Airport, used in Hospital.
• Used in malls and public places.

VIII. CONCLUSION

It is difficult for person suffering from arthritis, back pain,knee pain etc. to use Indian style commode and most of population is not comfortable with western commode. Metro cities like Mumbai, Pune, Delhi etc. where space is big problem. This type of automatic indo-western commode system could be incorporated in public places to provide clean, hygienic and comfortable use of rest room in addition to save the place.

XII. REFERENCES

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