

Transforming Sanitation through Patented Toilets

November 19, 2021

We wish all our viewers a Happy and Reflective Toilet Day!

Introduction

Today the United Nations celebrates 9th World Toilet Day, to inspire action to tackle global sanitation crisis, with the theme 'valuing toilets'. To go by the theme, we attempt to add value to the same by taking you through few interesting patents related to toilets granted by the Indian Patent Office. Before we get there, around 11 crore toilets have been built as per the statistics under the [Swachh Bharat Mission](#) as per The Government of India.

Patents granted by Indian Patent Office

Patent No 1.

Title: AUTOMATIC TOILET SEAT WITH AUTO FLUSH

Patent No: 371263

Filing date:17.12.2019

Inventor: Gaurav Bhardwaj, Ayush Goswami, Shubham Agarwal and Kapil Sharma

Abstract: The present invention provides a toilet seat system for automatically lowering the toilet seat from a lifted position and lifting from the lowering position over the toilet bowl. The toilet seat system comprises a micro controller (1), a Servo motors (2), a Passive infrared sensor (PIR Motion sensor) (3), a Jumper wires (4), a 1A -5V adapter (5), a Led (6), a Switch (7), a Toilet seat cover (8) and a

Cistern (9). The presence of a user is detected by the system and transmitted to the passive infrared sensor (3) for lowering down the toilet seat. Detection of the user in the cistern (9) causes an automatic flush. Once the user has left the toilet, the input to the system will become zero and the toilet seat lifts up.

Patent no. 2

Title: TOILET SUPPORT ASSISTING ASSEMBLY FOR ELDERLY OR DISABLED PERSONS

Patent No.: 342647

Filing Date:17.12.2019

Inventor: Sangram Das

Abstract: The present disclosure proposes a toilet support assisting assembly for elderly or disabled persons. The toilet support assisting assembly provides a pair of adjustable arm supports for elderly or disabled persons and is incorporated with various assisting features such as flushing rope attachment 106, an alerting member 101, an emergency light 105, an inbuilt battery 104, a health faucet with holder 106, soap dispensers 110, paper roll holder 111, magazine holder, fluorescent stickers, anti-slip mat 109, etc. The toilet support assisting assembly with arm support for elderly or disabled people enables them to stand and sit easily. The toilet support assisting assembly is cost effective and meets all the requirements of elderly or disabled persons. The toilet support assistive assembly acts as a single united assembly with various features that meet the requirements of the elderly or disabled persons with enhanced convenience and comfort.

Patent No. 3

Title: AUTOMATIC TOILET CLEANING INDICATOR FOR THE BLIND

Patent No.: 375973

Filing date: 06.11.2019

Inventor: S. Shahsi Anand, P Jayakumar, K. Jeya Prakash, P. Manikandan, P Naveen and Ch. Nikhil Kumar

Abstract: The fact has got us thinking about the Public toilet at the Hostel and hospitals we. might be most at risk of coming into" contact with all these bacteria. The place that makes us squirm the most is visually impaired toilet. Some people think that they flushed properly but due to visual challenge they may leave the toilet dirt on the bowl and hang around on. This invention relates to an automatic toilet-cleaning system, mainly designed for the automatic cleaning of toilet installed in public areas, which are need.to regular cleaning the toilet, this negates the necessity of the unpleasant task of having to manually clean, on a fairly frequent basis, toilets are frequently used, such as those installed in public places, which are needed to clean automatically. Present scenario proves that there is no proper toilet cleaning facility except manual cleaning. To overcome the unhygienic cleaning, this invention related to an automatic toilet-cleaning system and indicator, mainly designed for the automatic cleaning of toilet installed in visually challenged persons" hostel and hospital areas, which are need to regular cleaning the toilet. Image sensing Camera for capturing the dirt, after the occupier left from the toilet, the camera will protrude out from its chamber and take picture of the toilet bowl and surrounding area, then it analyzes the picture for dirt around., if the dirt found Automatic flushing device which have number of nozzles around it, the nozzle is connected to the inlet pipe to exert the pressurized water and air towards toilet seat and bowl. The nozzle unit can be turn able and slightly over toilet seat and bowl. The nozzle unit can be turn able and slightly over toilet seat. Motion sensor, sense the movement of the person inside the toilet and give the signal to speaker, when the other person tries to open the door from outside, the speaker announce that the toilet is occupied. The ammonia sensor in the toilet senses the odor inside the toilet and activates the flushing system when occupier is not inside the toilet.

Patent No. 4

Title: A WATER CONSERVATION TOILET SYSTEM

Patent No.: 351065

Filing date: 11.07.2019

Inventor: DAS, Dharm

Abstract: The present disclosure provides a toilet system. The system includes: commode having an inlet opening at upper portion to receive waste materials, and an outlet opening at lower portion; and enclosure to accommodate the commode such that upper portion of the commode projected above upper surface of the enclosure, and lower portion of the commode with the outlet opening of the commode accommodated within the enclosure. The system includes first door pivotally fitted to upper portion of the enclosure, the first door adapted to move between a closed position and an open position. At the closed position, the first door moves towards lower portion of the commode to enable closing of the outlet opening of the commode. At open position, first door moves away from lower portion of the commode to receive the waste materials. The first door biased by a biasing means to remain at closed position.

Patent No. 5

Title: FLUSH FREE TOILET SYSTEM

Patent No.: 371860

Filing date: 02.05.2017

Inventor: R. Jaishanker

Abstract: Flush Free Toilet System that does not feature water flush mechanism is disclosed. Said toilet features a conveyor belt (2) configured to move on rollers (3) is positioned in the cavity below the seating position. One of the rollers is rotated by the action of a rocker arm, which in turn is operated by the action of user's foot on a rocking pedal. The rotation of the roller also turns a timer pulley assembly that activates two flaps that are designed to move in opposite

direction, at any given moment. The toilet system also features a container (6) carrying disinfectant liquid, wherein said container is connected to the nozzles configured to spray the liquid on the conveyor belt through a flexible tube (7).
FIG.1

Note: The abstracts are provided as published on the IP India website.

Wishing you a transformative toilet day once again!

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