Autonomous Sewage Cleaning Mechanism

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Rainfall and sanitary sewage systems are important for epidemiological wellbeing of the cities; therefore appropriate maintenance of the sewage networks is important. Clogging of the sewage canalization is a major problem and this requires regular cleaning of solid waste accumulated there. Manual cleaning of the sewage systems is time consuming and costly and therefore development of the gravitational automatic flushing system that will be operated with rainwater is important problem to solve. I developed a preventive sewer flushing bucket that accumulates streaming waters and releases them in a rapid burst by gravity driven overturning, effectively washing down accumulated solids downstream. Parameters of the flush bucket allow sufficient volume of water for effective flushing of accumulated solids within the sewers and suitable for installation in to any of the existing manholes. A 150 l. bucket when flushed allows formation of a 5 m or 2 m long water piston in 200mm and 300mm drains respectively. Such volumes clear partial blockages by particles and gravel after several cycles for up to 35 meters of drain pipework. To combat mosquito breeding and water stagnation a calibrated drainage holes are placed at the bottom of buckets. The biggest advantage over other designs is that our system can be installed in to any existing sewage wells. Installation and removal of the device is done through the top hatch. Self-actuating gravity driven flushing bucket for sewers is effective and easy to implement technology. Our modules are cheap to manufacture and work effectively for a long time on any drain systems, without the need for external supervision and maintenance. If necessary, suggested system allows addition of a specified portion of disinfectant to the flush bucket.

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