



CONSOLATION

Modified hand-cart with steering mechanism and brakes

Md. Usman Hanif Patel, Nidhi Kumari Gupta, Pavithra R, Vidya Ramesh
Jalgaon, Maharashtra; Muzaffarpur, Bihar; Erode, Tamil Nadu; Bangalore, Karnataka

The students have suggested incorporating easy steering mechanism and brakes to make turning hand-carts easy and arrest slide on inclines respectively.

Young Usman, an IGNITE winner earlier for his idea to run ceiling fan through a roof top windmill, saw a street vendor struggling with his hand cart while negotiating a turn on an incline, which led to this idea. He also thought of adding a folding seat to the cart. Drawing is one of his favourite hobbies though it has little to do with his ambition to become a fighter pilot and serve the country. Usman was selected for National Child Award for Exceptional Achievement and was awarded on Children's Day by the Hon'ble President in 2013. Usman is studying in class sixth now and is a regular participant in various science exhibition organised in the city.

Nidhi dropped out of school after passing class 8 to return to her village, though she wished to continue her studies for a few more years. Her father moves around from place to place selling 'petha' (a kind of sweet made of ash gourd) on his hand cart. He often faced problem turning it especially at acute turns. To do this, the loaded cart has to be lifted and rotated resting on the front wheels, which is

quite cumbersome. She saw her father having trouble doing this and thought of a steering kind of a mechanism, which could solve his problem.

Trained *Bharatanatyam* dancer, Pavithra, aspires to become a doctor and serve the society. She likes to keep abreast of all the happenings around her. She thus reads news papers a lot, collects coins and even writes in a local daily. She has won a number of awards in essay writing and speeches and plans to make a library of her own with more than 1000 books. Along with her younger sister Elakkiya, Pavithra also designed a looms for lower limb physically challenged. In their loom they have replaced the pedal operated system with a motor and a gearbox attached to a pulley mechanism so that it can be operated by hands only. Pavithra, who is currently studying in class 11, has been recognised by many Government and Non-Government institutions and schools for her work in the field of innovations.

The two sisters have come up with loom for lower limbed physically challenged. In their loom they have replaced the pedal operated system with a motor and a gearbox attached to a pulley mechanism

Vidya suggested incorporating gears and bicycle styled steering mechanism in hand-carts. She likes reading books, engaging herself in outdoor activities and is still looking for a challenging ambition to chase. Another of her idea, 'hilly terrain cart', finds mention in subsequent pages.