PATENT NO. 378489 A MOBILE EQUIPMENT FOR A USER UNABLE TO USE HIS HANDS

APPLICATION NO. 2783/DEL/2010

ABSTRACT

A mobility equipment for a user who is unable to use his hands is disclosed. The mobility equipment comprises a frame structure, a first axle configured on the frame structure, a pair of front wheels coupled to the first axle, at least one rear wheel coupled to a rear side of the frame structure, a driving mechanism, a steering mechanism coupled to the at least one rear wheel, a braking mechanism operatively coupled to the wheels and a seat for seating the user. The seat of the mobility equipment is swivable around a vertical axis. The at least one rear wheel is swivable about a vertical axis by the steering mechanism. The steering mechanism is operatively coupled to the seat such that the swivel motion of the seat is transmitted to the steering mechanism, thereby causing swivel motion of the at least one rear wheel for steering the mobility equipment.

APPLICANT

Malaviya National Institute of Technology Jaipur **INVENTOR** Sharma, Dilip Soni, S.L. Kaushik, Ashutosh Meena, Jyotiraditya Agarwal, Abhishek Modi, Abhishek Malaviya National Institute of Technology, J.L.N Marg, Jaipur, Rajasthan

CLAIM 1

A mobility equipment (1000) for a user who is unable to use his hands, the mobility equipment (1000) comprising a frame structure (100) having a front side (100a) and a rear side (100b); a first axle (150) configured on the front side (100a) of the frame structure (100), the first axle (150) adapted to be rotated about a horizontal axis (A); a pair of front wheels (300) coupled to the first axle (150) and adapted to be rotated about a horizontal axis (A) parallel to that of the first axle (150), a first wheel (300a) of the pair of front wheels (300) being coupled to a first end (150a) of the first axle (150) and a second wheel (300b) being coupled to the second end (150b) of the first axle (150); at least one rear wheel (350) coupled to the rear side (100b)of the frame structure (100), the at least one rear wheel (350) being swivable about a vertical axis (V); a driving mechanism (200) operatively coupled to the first axle (150) for enabling rotation thereof, thereby effectuating rotation of the pair of front wheels (300) and consequently the at least one rear wheel (350) to effectuate movement of the mobility equipment (1000), the driving mechanism (200) being operable by lower limbs of the user; a steering mechanism (400) coupled to the rear side (100b) of the frame structure (100) and to the at least one rear wheel (350), the steering mechanism (400) adapted to steer the mobility equipment (1000) during movement thereof; a braking mechanism operatively coupled to at least one of the pair of front wheels (300) and the at least one rear wheel (350) for restricting rotation of the wheels to restrict the movement of the mobility equipment (1000), the braking mechanism being operable by the lower limbs of the user; and a seat (500) for seating the user, the seat (500) being configured on the frame structure (100) and being swivable around a vertical axis (V), wherein the seat (500) is operatively coupled to the steering mechanism (400) to transmit its swivel motion to the steering mechanism (400) and to the at least one rear wheel (350), thereby causing swivel motion of the at least one rear wheel (350) and effectuating steering of the mobility equipment (1000) in a desired direction.