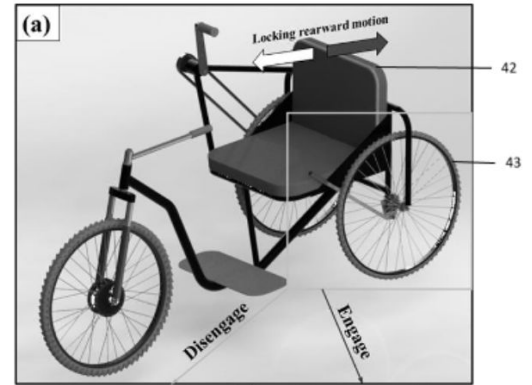


**PENDING****(IN202211054912)**

## A ratchet assembly to enable unidirectional movement of a mobility vehicle wheel



### NEED

As mobility vehicles like wheelchairs or tricycles ascend inclines, they often face backward motion risks, compromising user safety. What if there was a way to prevent this without requiring complex braking systems?

### TECHNOLOGY OVERVIEW

The patent presents a ratchet assembly designed to engage with the wheel hub, preventing backward rotation of mobility vehicle wheels on inclines. It uses a pawl and pin mechanism to lock and unlock the assembly, providing secure unidirectional movement.

### TECHNOLOGY KEY FEATURES

Unidirectional movement; Pawl and pin mechanism; Locking lever for safety; Suitable for wheelchairs and tricycles; Made from alloy steel.

[Read more here](#)

### MARKET ANALYSIS

The global mobility vehicle market is growing at a CAGR of 7.5%, driven by increasing demand for assistive devices in healthcare and elderly care. The market is projected to reach \$27.7 billion by 2033. (Source: Market Research Future, 2023)

### Target Industries

Mobility Vehicle Manufacturers; Assistive Device Innovators; Healthcare Equipment Suppliers

### AT A GLANCE

- SDG 3: Good Health and Well-being; SDG 9: Industry, Innovation, and Infrastructure

Technology is available for licensing/ co-development.

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