TECHNOLOGY

Windle

OVERVIEW

Executive Summary
Recreational pool space is divided by lane lines consisting of buoyant plastic disks strung along a steel cable. Each day, lane lines are moved into different configurations to accommodate different pool usage. A tensioner is used to relieve or apply tension from one end. Current tensioner designs possess many weaknesses including poor ergonomics, exposed pinch points, and slow task speed. They often have to be replaced a few times a year and can even shatter pool tiles if dropped, which can seriously injure swimmers.

Students at the University of Maryland have created the Windle, a novel lane line tensioner that outperforms existing tensioners. Windle's ergonomic uniaxial design enables standing operation, so users no longer have to lie down, squat, or kneel over the side of a pool to tighten the lane line. Its discreet profile also minimizes pinch points and helps prevent tampering. Once the speeder handle is in place, the user rotates it clockwise to reel in the lane line cable. When sufficient tension is reached, the user pushes down Windle to engage a locking key that enters keyseat recesses built into the enclosure. The integrated drive shaft's tendency to rotate counter-clockwise will keep the locking key in place and the tension locked. The tensioner remains in this state until the tension needs to be released. To release, simply use the speeder handle to guide the locking keys out. With Windle, users will quickly and safely be able to configure pools to their needs.

APPLICATIONS

· Tensioner for swimming pool lane lines

ADVANTAGES

· Ergonomic
· Faster than current tensioners
· Discreet design minimizes pinch points and prevents tampering
· Compatible with common tooling
· Intuitive assembly and disassembly

CONTACT INFO

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Additional Information

INSTITUTION

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PATENT STATUS

Pending

CATEGORIES

- Engineering

EXTERNAL RESOURCES

PS-2018-096