Game Changing Technology
United States Patent No.: US 11,981,160B2
Date of Patent: May 14, 2024

"This revolutionary technology provides a multi-piece wheel for a vehicle that is disassembled to laterally rotate directional tires without needing to dismount a tire from a rim", Rise Wheels

Abbreviated Overview:
Smarter Tire Wear Solutions

Why Rise Wheels Matter: Inner tire wear, often blamed on misalignment, is caused by crowned roads designed for rainwater runoff. This uneven wear can cut tire life by up to 25% and affect handling. Rise Wheels, with their patented dual-faced design, solve this by allowing you to decouple and recouple the wheel at the spoke ends, flipping its orientation without remounting the tire.

Key Benefits:

• **Directional Tire Fix:** Maintains proper rotation for directional tires, ensuring even wear and extending tire life by 15-30%.

• **Versatile Fit**: Works for all vehicles—FWD, RWD, commuters, or performance cars. Enables tire rotation for staggered setups (different wheel sizes/offsets).

• **User-Friendly**: Quick, secure decoupling takes minutes per wheel, reducing alignment costs and tire replacements.

• **Aesthetic Appeal**: Dual-faced design offers customizable finishes for a sleek look.

Why It's Innovative: Rise Wheels proactively combat uneven wear, improve efficiency, and enhance safety. Perfect for any driver, they're a functional and stylish upgrade that redefines wheel design.

Rise Wheels: The wheel reinvented.

Detailed Overview
Revolutionizing Tire Longevity and Performance

Why are Rise Wheels a game-changer? They tackle the persistent problem of inner tire wear, often mistaken for a simple alignment issue. Most roads today are designed with a subtle crown—a slight curve for efficient rainwater runoff. While this keeps roads safer in wet conditions, it comes at a cost: the inner edges of your tires take a beating, wearing down faster due to uneven load distribution. This can reduce tire life by up to 25%, increase fuel consumption, and compromise handling.

Rise Wheels introduces a patented dual-faced wheel design that redefines how we combat this issue. Unlike conventional wheels, Rise Wheels allow you to decouple and recouple the wheel from the tire housing at the spoke ends with an innovative, secure mechanism. This means you can effortlessly flip the wheel's orientation without dismounting the tire, ensuring optimal performance on either side of the vehicle.

Perfect for Directional Tires: Many high-performance and all-season tires feature directional tread patterns, optimized for one rotation direction to maximize grip, water dispersion, and stability.

On crowned roads, swapping tires side-to-side can disrupt this design, leading to uneven wear or reduced performance. Rise Wheels solve this by allowing you to maintain the tire's intended rotation direction—forward on both left and right sides. The result? Even tread wear, extended tire life (potentially by 15-30%), and consistent handling, no matter the road's bias.

Universal Appeal, Unmatched Versatility: Rise Wheels are engineered for all vehicles—from front-wheel-drive commuters to rear-wheel-drive performance machines and everything in between. High-performance RWD vehicles with staggered setups (different wheel sizes or offsets front-to-rear) often

can't rotate tires conventionally. Rise Wheels break this barrier, enabling rotation without sacrificing fitment or style. Whether you're carving canyons in a sports car or navigating city streets in a daily driver, these wheels deliver.

Functional Innovation, Aesthetic Edge: The dual-faced design isn't just practical—it's a visual statement. With customizable finishes (think sleek machined surfaces or bold powder-coated hues), Rise Wheels blend form and function seamlessly. The decoupling system is user-friendly, requiring just minutes per wheel for a flip. It's a proactive solution that saves you from frequent alignments, costly tire replacements, and uneven wear patterns.

Rise Wheels: The Future of Wheel Design

Say goodbye to reactive fixes and hello to smarter engineering. Rise Wheels empower drivers to take control of tire wear, enhance vehicle efficiency, and elevate style—all in one package. Whether you're chasing performance or practicality, Rise Wheels are the ultimate upgrade for any ride.

Rise Wheels: Outsmart Tire Wear, Outshine the Rest.

See Business Brokers Florida, BuyBizSell

(12) **United States Patent**
Martell

(10) **Patent No.: US 11,981,160 B2**
(45) **Date of Patent: May 14, 2024**

(54) **REVERSIBLE MULTI-PIECE WHEELS FOR DIRECTIONAL TIRES**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 352 days.

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(51) **Int. Cl.**
B60B 3/04 (2006.01)
B60B 3/10 (2006.01)

(52) **U.S. Cl.**
CPC ***B60B 3/044*** (2013.01); ***B60B 3/10*** (2013.01); *B60B 2310/305* (2013.01)

(58) **Field of Classification Search**
CPC B60B 3/04; B60B 3/041; B60B 3/042; B60B 3/044; B60B 3/045; B60B 3/047; B60B 3/10; B60B 23/06; B60B 23/10; B60B 2310/305; B60B 1/14
See application file for complete search history.

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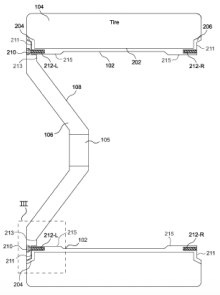
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(57) **ABSTRACT**

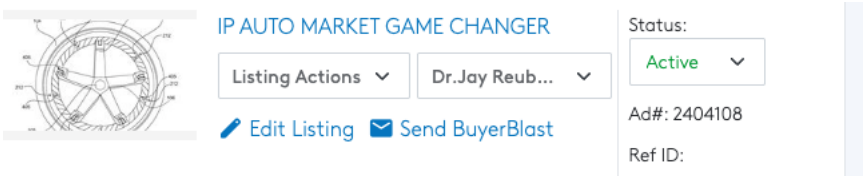
The technology provides a multi-piece wheel for a vehicle that is disassembled to laterally rotate directional tires without needing to dismount a tire from a rim. The multi-piece wheel includes a rim housing with threaded apertures provided at side edges proximate to an outboard flange and an inboard flange. The multi-piece wheel includes a face that is removably coupled to the rim housing, the face having a bore that centers the face on an axle hub, a disk that is concentric with the bore; and spokes that are mechanically coupled to the disk and extend outwardly therefrom, the spokes having apertures at an end opposite to the disk that align with the threaded apertures in the rim housing. The multi-piece wheel further includes a fastener that releasably couples the face and the rim housing and a secondary fastening mechanism that mechanically engages the spokes and the rim housing.

20 Claims, 6 Drawing Sheets



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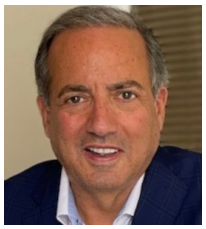
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