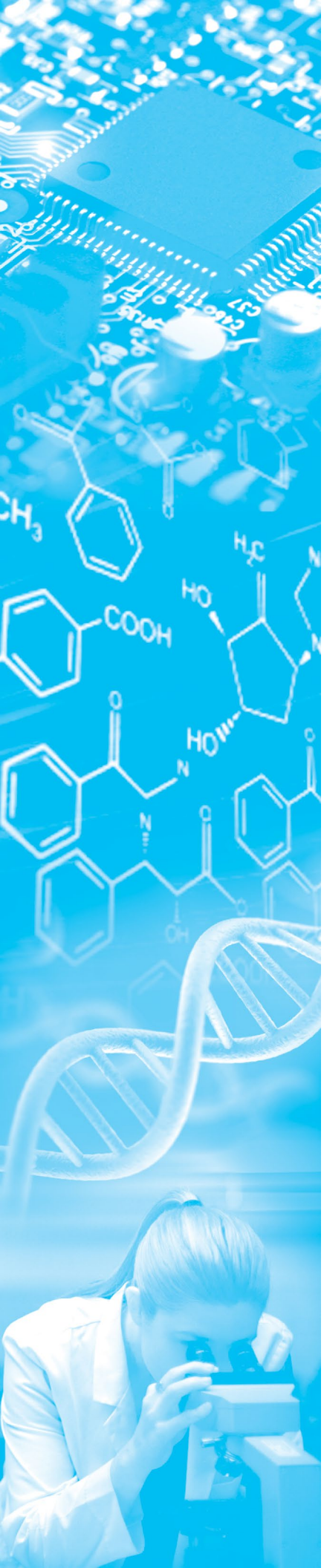

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Automated Landing Gear Systems for Trailers

Trailer landing gears are the retractable legs that keep a trailer upright and stable when the tractor is removed. Typically, two legs are positioned near the forward end and underneath the trailer to support that trailer. This allows the towing vehicle to be detached or in the case of a semi-trailer, the truck can be driven out from under the trailer. In current trailer landing systems, the legs can be raised or lowered by a system of reduction gears that is manually operated by turning a hand crank multiple time. This process is tedious, time consuming and can cause injuries to the person installing and operating the crank. Though newer crank models have gear ratio settings that allow for faster lowering and lifting of the legs the entire process is still quite laborious and an unnecessary use of the truck drivers' energy. There are some newer current systems on the market aimed at improving the crank system, such as pneumatic automation and hand-held drill. However, these are either costly, require a lot of installation, or only offer very minimal improvement. The inventors of this novel technology developed a better system and method for supporting trailers that will offer the ability to electrically extend and retract the legs of the trailer landing gear.

Technology

This novel technology provides an automated trailer landing gear system that has the potential to completely replace and/or augment the current landing gear system operated by a manual crank. The system will be powered by the truck as well as an additional battery. The gear system can be operated and controlled with a switch panel or remote control. The motor for operating the equipment will be powered by the power of the semi-truck. itself. The motor associated with this landing gear will be powered through the existing power source located in the truck that is commonly used for operating brake lights and blinkers of the trailer.

Application

This novel technology can be used for developing a trailer landing gear powered by the truck that will be completely automated. Once it is adopted by truck manufacturers it can make the current manually operated trailer landing gear obsolete.

Advantages/Benefits

- This electrically operated landing gear will be significantly more efficient and easier to operate than the traditional manual system.
- Once the new landing gear is installed no extra equipment will be required to be installed or hauled along for operating the system.
- This electrically operated trailer landing system will reduce operating time, physical stress and eliminate certain safety hazards.

Status of Development

- The inventors have developed the initial design and are currently working on building a prototype.

Intellectual Property Status: Provisional patent application submitted on April 30th, 2020.

Information on Inventors

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