WiSys TECHNOLOGY FOUNDATION ™

WiSys Ref: T170002

SADDLE LIFT TO ENHANCE INDEPENDENCE OF HORSEBACK RIDERS WITH DISABILITIES

Background

Horseback riding is used therapeutically for riders with many types of disabilities caused by, for example, amputation, cerebral palsy, muscular dystrophy, multiple sclerosis, paralysis, spina bifida, or spinal cord injury. In many of these cases, riders who are normally restricted to a wheelchair utilize a horse's movement to improve their motor skills, coordination, balance, and core strength. Therapeutic horseback riding and the related practice of hippotherapy are used worldwide. In fact, over 870 member centers from over 40 countries in the Professional Association of Therapeutic Horsemanship (PATH) International serve more than 62,000 riders every year. There have been many technologies developed to promote independence of therapeutic riders, including ramps and other devices to help the riders themselves mount their horses. However, a major gap that exists in facilitating independence, especially for riders that are wheelchair-bound, is getting the saddle onto the horse before riding. Saddles can weigh as much as 50 pounds, and a horse's back can be four to six feet off the ground, too high to saddle from a seated position. Due to these restrictions, therapeutic riders typically need assistance in saddling the horse, hindering the riders' ability to independently execute the full horseback riding experience.

Technology

UW-River Falls innovators with expertise in nursing, animal science, and engineering have developed an easy-to-use system capable of lifting a saddle onto a horse by users who are in a seated position below the height of the horse, such as in a wheelchair. The saddle lift can be installed on site in stables and uses a system of hooks and pulleys to lift any type or size of saddle with little force from the user. The system can be moved over the horse, so the horse itself does not have to be precisely positioned. Once the saddle is on the horse, the user can easily release the hooks by adjusting the tension on the lift's rope. The rider is also able to tighten the saddle straps and secure the saddle from a seated position without external assistance. The novel design of this saddle lift technology provides for a critical advancement in helping therapeutic riders achieve independence.

Research and Development Status and Commercialization Needs

A prototype has been developed with support from the McNair Scholars Program and the UW-River Falls Agricultural Engineering Department. The prototype has been tested by a person with physical disabilities saddling a live horse. Minor adjustments may be made to optimize comfort for the user and aesthetics, but the current prototype design is fully functional. WiSys Technology Foundation is seeking a strategic partner for manufacturing, marketing, sales, and distribution of this unique system.

Applications and Key Benefits

- Enhances independence of riders with disabilities
- Easy to use with minimal training
- System comprises a self-releasing/unlocking mechanism for ease of use
- Adjustable to all saddle types
- Pulleys reduce effort needed to lift weight of saddle
- Avoids damage to saddle

Intellectual Property

A U.S. Patent has been issued for this technology (US 10,519,028). For more information on partnering opportunities please contact us at licensing@wisys.org.