

## Patent Protection & Registration

[Patents](#) grant property rights on new and useful inventions, allowing the patent holder to prevent others from using, making, or selling that invention without permission for a limited time. U.S. patents are permitted by the U.S. Constitution and are designed to promote scientific progress and invention. By allowing inventors to profit from licensing or selling their patent rights, inventors can recoup their research and development costs and benefit financially from their inventing efforts. There are three main types of patents utility, plant, and design. Utility and plant patents can last up to 20 years, while design patents can last up to 15 years. When a patent expires, the patented material enters the public domain, making it free to use by anyone without a license. U.S. patents are issued by the [United States Patent and Trademark Office \(USPTO\)](#)

U.S. Patent No. 12,037,741 entitled “Textile Article Comprising Graphene and Process for its Preparation” issued July 16, 2024 to Directa Plus S.p.A. of Lomazzo, Italy. Invented by Laura Giorgia Rizzi of Saronno, Italy; Giulio Cesareo of Como, Italy and Razvan Popescu of Mozzo, Italy. Abstract: Textile article with a pattern comprising graphene, defining a surface with empty portions and full portions, with a percentage of coverage from 10 to 70% of the surface defined by the pattern, so as to form a thermal circuit for optimal management of the heat absorbed and of the breathability of the article, and the process for its preparation.

U.S. Patent No. 12,036,958 entitled “Selectively Implementing Automated Cleaning Routines During Unloading Cycles for Transport Vehicles” issued July 16, 2024 to Deere & Company of Moline, Illinois. Invented by Michael D. Peat of Dubuque, Iowa. Abstract: A system and method are provided for automated cleaning of a loading container of a transport vehicle (e.g., dump truck, ejector, scraper), wherein the loading container includes controllable elements (e.g., hydraulic lift cylinders for a truck bin, an ejector blade) for transitioning between loaded and unloaded states. Characteristics of carryback material remaining in the loading container are estimated during a detected unloaded state of the transport vehicle, wherein whether to initiate an automated cleaning stage is determined based on at least one of the estimated characteristics. Upon determining to initiate the automated cleaning stage, performance of a cleaning routine is automatically directed during or in association with an unloading stage for the loading container via the controllable elements. The elements are controlled during the cleaning routine in accordance with a severity level selected from among various progressively increasing severity levels based on at least one of the estimated characteristics.

U.S. Patent No. 12,037,755 entitled “Dual Drive Milling Attachment” issued July 16, 2024 to Wirtgen GmbH of Windhagen, Germany. Invented by Stefan Abresch of Dierdorf, Germany and Marcel Joisten of Neuwied, Germany. Abstract: A milling attachment for a work machine includes a frame including first and second frame side walls A motor mounting plate is removably mounted on the second frame side wall. A milling drum includes first and second mounting flanges. A first drive motor is mounted on the first frame side wall and includes a drive end connected to the first drum mounting flange by

a plurality of threaded fasteners. A second drive motor is mounted on the motor mounting plate and connected to the second drum mounting flange by a stab-in non-threaded connector.