

## 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. 11,879,231](#) entitled “System and Method of Selective Automation of Loading Operation Stages for Self-Propelled Work Vehicles” issued January 23, 2024 to Deere & Company of Moline, Illinois. Invented by Michael G. Kean of Maquoketa, Iowa; Nathaniel M. Czarnecki of Dubuque, Iowa and Ryan Stumvoll also of Dubuque, Iowa. **Abstract:** A method is disclosed for controlled loading by a self-propelled work vehicle comprising ground engaging units supporting a main frame, and at least one work attachment moveable with respect to the main frame for loading and unloading material in a loading area external to the work vehicle. Using at least one detector, such as cameras and/or vehicle motion sensors, location inputs for the loading area are detected relative to the main frame and/or at least one work attachment. A trigger input is detected in association with transition of the work vehicle from a first work state to an automated second work state. In the second work state, at least movement of the main frame and/or the at least one work attachment is automatically controlled relative to a defined reference associated with the loading area. Such a system and method facilitates loading operations and accordingly higher productivity regardless of operator experience.

[U.S. Patent No. 11,879,216](#) entitled “Paver Having Elevation Profile Monitoring Equipment and Methods for Operation Thereof” issued January 23, 2024 to Wirtgen GmbH of Windhagen, Germany. Invented by Jens Brieskorn of Bonn, Germany; Lothar Schwalbach of Asbach, Germany; Stefan Wagner of Bad Honnef, Germany; Bernd Walterscheid of Sankt Augustin OT Buisdorf, Germany; Gunnar Ramsegar of Borod, Germany and Martin Dahm of Gieleroth, Germany. **Abstract:** A paver, in particular a slipform paver, has a machine frame supported by front and rear undercarriages and a paving device for the paving of material. The paver is provided with an apron monitoring device for generating elevation profile data or elevation profile signals describing the elevation profile of the material deposited in the apron of the paving device in a direction transverse to the working direction. A data or signal processing device receives the elevation profile data or signals. The apron monitoring device provides the data needed to allow the material to be spread more evenly across the working width of the paver during the feeding operation by means of a spreading device for spreading the material to be paved in a direction transverse to the working direction and/or to allow the spreading device to be controlled for improved spreading of the

material after the paver has been fed.