

## 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. D999,465](#) entitled “Shoe Disinfecting Device” issued September 19, 2023 to DG Technologies, LLC of Ooltewah, Tennessee. Invented by Dillon George also of Ooltewah, Tennessee. Claims: The ornamental design for a shoe disinfecting device, as shown and described.

[U.S. Patent No. 11,761,862](#) entitled “System for Selecting and Processing DNA from Agarose Gels and Methods of Use Thereof” issued September 19, 2023 to Bryan Materi of Hermitage, Tennessee and Abigail Collins of Cookeville, Tennessee. Also invented by Bryan Materi and Abigail Collins. Abstract: A device used to cut lanes and bands from an agarose gel is provided. The instrument uses cutting edges to separate DNA in lanes as well as in bands to allow for easier processing of separated DNA. This device also allows for standardization of the sizes of cut bands so that less is wasted.

[U.S. Patent No. 11,761,763](#) entitled “Self-propelled Civil Engineering Machine System with Field Rover” issued September 19, 2023 to Wirtgen GmbH of Windhagen, Germany. Invented by Matthias Fritz of Linz/Rhein, Germany; Cyrus Barimani of Königswinter, Germany and Christian Berning of Zülpich, Germany. Abstract: A civil engineering machine has a machine control unit configured to determine data which defines the position and/or orientation of a reference point on the civil engineering machine in relation to a reference system independent of the position and orientation of the civil engineering machine. A geometrical shape to be produced on the ground is preset in either a machine control unit or a field rover control unit. The field rover is used to determine a position of at least one identifiable point of the preset geometrical shape in the independent reference system. Curve data defining a desired curve in the independent reference system, corresponding to the preset shape, is determined at least partially on the basis of the position of the at least one identifiable point of the preset geometrical shape in the independent reference system.

[U.S. Patent No. 11,761,155](#) entitled “Self-propelled Milling Machine, as Well as Method for Controlling a Self-propelled Milling Machine” issued September 19, 2023 to Wirtgen

GmbH of Windhagen, Germany. Invented by Andreas Vogt of Asbach, Germany; Cyrus Barimani of Königswinter, Germany and Christian Berning of Zülpich, Germany. Abstract: A self-propelled construction machine for milling a ground surface is provided with a machine frame, a working drum, and a transport conveyor with a discharge end from which worked-off milling material is dischargeable onto a point of impingement on a loading surface of a transport vehicle, wherein the transport conveyor is laterally slewable to a slewing angle about at least a first slewing axis. A controller is configured, during an initialization process, to specify a command variable within a coordinate system, the coordinate system being stored during the initialization process with its origin at a starting point associated with the machine. The controller is further configured during a working process, wherein the coordinate system is stationary, to automatically control the slewing angle corresponding to detected changes in position and/or orientation of the machine and relative to the command variable.

[U.S. Patent No. 11,761,156](#) entitled “Construction Machines” issued September 19, 2023 to Wirtgen GmbH of Windhagen, Germany. Invented by Tobias Stinner of Nister, Germany; Andreas Salz of Neustadt (Wied), Germany and Christian Berning of Zülpich, Germany. Abstract: In a self-propelled construction machine (1), in particular road milling machine, stabilizer, recycler or surface miner, comprising a machine frame (2), and at least one working device (6), in particular milling drum, which is arranged in a housing (4) open towards the bottom that is at least partially closed on at least one side by at least one edge protector (8) height-adjustable relative to the machine frame (2), wherein, for the purpose of height adjustment, at least one first lifting device (10) is provided, the first end (15) of which is connected to the machine frame (2), and the second end (16) of which is connected to the height-adjustable edge protector (8), it is provided for the following features to be achieved: a second lifting device (12) is provided, the first end (18) of which is connected to the machine frame (2), and the second end (20) of which is connected to a first end (22) of a transmission device (14), which is in turn connected, with a second end (24), to the height-adjustable edge protector (8).

[U.S. Patent No. 11,761,157](#) entitled “Self-propelled Construction Machine” issued September 19, 2023 to Wirtgen GmbH of Windhagen, Germany. Invented by Sebastian Drumm of Rosrath Germany and Christian Berning of Zülpich, Germany. Abstract: A road milling machine includes a machine frame, at least three travelling devices, a milling drum, and at least one hydraulic drive system. The hydraulic drive system includes at least one hydraulic pump, at least one hydraulic fixed displacement motor for driving at least one driven travelling device, and one each hydraulic variable displacement motor for driving the remaining travelling devices. A first gearbox is arranged between the fixed displacement hydraulic motor and its associated travelling device. One each second gearbox is arranged between each of the hydraulic variable displacement motors and their associated travelling devices. The transmission ratio of



the first gearbox is lower than the transmission ratios of the second gearboxes and/or the displacement volume of the fixed displacement motor is smaller than the maximum displacement volume of the variable displacement motors.