

## 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 14 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. 11,314,240](#) entitled “Method and System for Automatic Selection of Physical Quantity Measurements” issued April 29, 2022 to ABB Schweiz AG of Baden, China. Invented by Lorenzo Bianchi of San Giovanni Valdarno, Italy and Francesca Mazziotti of Montevarchi, Italy. Abstract: A system is disclosed comprising: a plurality of electronic measuring devices adapted to provide measurement data of a set of physical quantities; wherein the measurement data from each measuring device are characterized by at least one respective measuring characteristic; a data processing arrangement, configured to calculate at least two measurements for each physical quantity based on said measurement data; and further configured to select a best measurement for each physical quantity based on said measuring characteristics.

[U.S. Patent No. 11,313,087](#) entitled “Earth Working Machine Having a Rotatable Working Apparatus Axially Positionally Retainable with High Tightening Torque by Means of a Central Bolt Arrangement, and Method for Establishing and Releasing Such Retention” issued April 26, 2022 to Wirtgen GmbH of Windhagen, Germany. Invented by Christian Berning of Zulpich, Germany; Karsten Buhr of Willroth, Germany; Markus Frankemolle of Hennef, Germany; Thomas Lehnert of Oberraden, Germany; Andreas Salz of Neustadt, Germany; and Hardy Wilhelmi of Dattenberg, Germany. Abstract: A replaceable milling drum for an earth working machine includes a milling drum tube and a protrusion structure fixed to the milling drum tube. A bearing stem protrudes from the protrusion structure axially away from a drive axial end of the milling drum tube. The bearing stem has an outer surface including at least first and second cylindrical bearing surfaces axially spaced from each other, a furthest one of the cylindrical bearing surfaces from the drive axial end having a smaller diameter than a next furthest one of the cylindrical bearing surfaces from the drive axial end, the bearing stem having a central opening therethrough co-axial with the drive axis.

[U.S. Patent No. 11,313,679](#) entitled “Self-Propelled Civil Engineering Machine System with Field Rover” issued April 26, 2022 to Wirtgen GmbH of Windhagen, Germany. Invented by Matthias Fritz of Linz/Rhein, Germany; Cyrus Barimani of Konigswinter,

Germany; and Christian Berning of Zulpich, 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.