

## 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. 11,383,246](#) entitled “Method for the Load-Dependent Operation of a Material Comminution System” issued July 12, 2022 to Kleemann GmbH of Goppingen, Germany. Invented by Thorsten Eckert of Bortlingen, Germany; Tobias Freihalter of Bohmenkirch, Germany; and Jochen Meier of Hulben, Germany. Abstract: The invention relates to a method for controlling the charging of a crusher, driven by a crusher drive via transmission elements, of a material comminution system, wherein material which is to be crushed is fed to the crusher, a filling level of the crusher is determined using a filling level sensor, and the volume flow of material to be crushed is set and/or regulated according to the filling level determined. The mechanical loading of the crusher or a characteristic variable which is dependent on the mechanical loading of the crusher is determined directly or indirectly, and the filling level of the crusher is set according to the mechanical loading determined, or the characteristic variable which is dependent thereon. The method permits low-wear operation of the material comminution system and of the crusher with, at the same time, a high material throughput rate.

[U.S. Patent No. 11,382,776](#) entitled “Biliary Stent” issued July 12, 2022 to BVW Holding AG of Cham, China. Invented by Lukas Bluecher of Eurasberg, Germany and Michael Milbocker of Holliston, Massachusetts. Abstract: The present disclosure provides an endoprosthesis where a preferably polymeric coating has a number of surface features such as protrusions or textures that are arranged in a micropattern. The endoprosthesis optionally has an expanded state and a contracted state, and in some cases includes a stent with a polymeric coating attached to an outer surface of the stent. The stent may have an inner surface defining a lumen, an outer surface, and a stent thickness defined between the inner surface and outer surface. The stent may comprise a plurality of surface textures extending from the stent surfaces, wherein the textures are arranged in a macropattern.

[U.S. Patent No. D957,360](#) entitled “Earphones” issued July 12, 2022 to Binatone Electronics International Ltd. of Hong Kong, China. Invented by Dino Lalvani also of Hong Kong, China. Claim: What is claimed is the ornamental design for earphones, as

shown and described.

[U.S. Patent No. 11,383,647](#) entitled “Earth Working Machine Having a Climbing Device that is Variable in Length and has a Plurality of Different Climb-Ready Operating Positions” issued July 12, 2022 to Wirtgen GmbH of Windhagen, Germany. Invented by Tobias Stinner of Nister, Germany; Christian Berning of Zulpich, Germany; Philipp Prassel of Neustadt/Wied, Germany. Abstract: The present invention relates to a self-propelled earth working machine (10) comprising a machine frame (14), a traveling gear (16) supporting the machine frame (14), a working apparatus (30), which is designed for working a subsoil, a driving force machine (46) for providing driving force for the earth working machine (10), an operator platform (28) situated on the machine frame (14) at an elevation level above the contact subsurface (U), and a climbing device (48) situated between the contact subsurface (U) and the operator platform (28), which has a plurality of step treads (54, 56, 58, 60), which are situated in succession along a virtual climbing axis (SA), the climbing device (48) being variable in length along the climbing axis (SA) and for this purpose at least one of the step treads (54, 56, 58, 60) being adjustable relative to at least one other of the step treads (54, 56, 58, 60) with the aid of an adjustment actuator (76). The invention provides for the climbing device (48) to be adjustable into at least three different climb-ready operating positions, it being the case that for each step tread pair (54/56, 56/58, 58/60) formed by two of at least three step treads (54, 56, 58, 60) situated in succession along the climbing axis (SA) that the distance between the step treads (54, 56, 58, 60) of the respective step tread pair (54/56, 56/58, 58/60) is of a different magnitude in different operating positions.

[U.S. Patent No. D957,573](#) entitled “Intelligent Spraying Apparatus” issued July 12, 2022 to Corey Craig of Auburn, Alabama. Also invented by Corey Craig of Auburn, Alabama. Claim: What is claimed is the ornamental design for an intelligent spraying apparatus, as shown and described.

[U.S. Patent No. 11,378,273](#) entitled “Reduced Resonance Burner” issued July 5, 2022 to A.O. Smith Corporation of Milwaukee, Wisconsin. Invented by Jimmy Charles Smelcer of Mount Juliet, Tennessee; Billy Anthony Batey of Watertown, Tennessee; Benjamin Bolton of Milwaukee, Wisconsin. Abstract: A burner apparatus for burning a gas and air mixture may include a burner wall. The burner wall may have a plurality of ridges and a plurality of grooves. Each groove may be defined between adjacent ridges. Each groove may also include a pair of slopes. Each slope may have an area of permeability having openings defined therein from which flames can project. Each ridge may define an area of reduced permeability relative to the areas of permeability of the slopes.

[U.S. Patent No. 11,378,625](#) entitled “Motor Vehicle Battery Wear Monitoring System and Method” issued July 5, 2022 to Bridgestone Europe, N.V./S.A. of Zaventem, Belgium. Invented by Lorenzo Alleva of Rome, Italy; Marco Pascucci of Rome, Italy. Abstract: The

invention concerns a motor vehicle battery wear monitoring system (1,1A,1B) that includes an acquisition device (11) and a processing device/system (12,12A,12B). The acquisition device (11) is: installed onboard a motor vehicle (2) that is equipped with an internal combustion engine, a battery for providing a battery voltage (V.sub.B), an alternator, and a starter motor for starting up the internal combustion engine; and configured to receive the battery voltage (V.sub.B) and to output quantities indicative of said battery voltage (V.sub.B). The processing device/system (12,12A,12B) is: configured to receive the quantities indicative of the battery voltage (V.sub.B) from the acquisition device (11); and programmed to perform a battery voltage monitoring based on the quantities indicative of the battery voltage (V.sub.B) to detect an approaching battery failure. The battery voltage monitoring includes detecting for each start-up of the internal combustion engine: a respective first voltage value (V.sub.MIN) that is a minimum value assumed by the battery voltage (VB) just after the starter motor has started operating to start up the internal combustion engine; and a respective second voltage value (V.sub.2) assumed by the battery voltage (V.sub.B) just after the internal combustion engine has been started up, the starter motor has stopped operating and the alternator has started operating. The battery voltage monitoring further includes for each start-up of the internal combustion engine: computing a respective voltage rise value (.DELTA.V.sub.R) indicative of a difference between the respective first (V.sub.MIN) and second (V.sub.2) voltage values; and detecting an approaching battery failure if the respective voltage rise value (.DELTA.V.sub.R) meets a predefined condition with respect to a predefined voltage rise threshold (T.sub..DELTA.VR).

[U.S. Patent No. 11,381,153](#) entitled "Method to Balance the Secondary Winding Current to Improve the Current Control Stability" issued July 5, 2022 to Universal Lighting Technologies of Madison, Alabama. Invented by Wei Xiong of Madison, Alabama and Dane Sutherland also of Madison, Alabama. Abstract: A power converter and method for improving the current control stability of power converter by balancing the secondary winding currents is provided herein. The power converter includes a primary circuit having switches controllably driven at an operating frequency to produce an AC output through a primary transformer winding, and a secondary circuit having first and second secondary windings having respective leakage inductances. The secondary circuit provides power at an output node based on a power transfer between the primary winding and the first and second secondary windings. At least one balance inductor is coupled in series with the first and second secondary windings, and configured to reduce a difference between the first leakage inductance and the second leakage inductance. The at least one balance inductor may further be configured to reduce a difference between first and second AC current peaks associated with the first and second secondary windings, respectively.