

## 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. D1,017,641](#) entitled “Breather Device” issued March 12, 2024 to Des-Case Corporation of Goodlettsville, Tennessee. Invented by Nikhil Rajkumar Gaikwad of Goodlettsville, Tennessee; Jonathan Lee Haworth of Hendersonville, Tennessee; Jay Michael Cooper of Nashville, Tennessee and Eric Cooper Pride of Nashville, Tennessee. **Claim:** What is claimed is the ornamental design for a breather device, as shown and described.

[U.S. Patent No. 11,927,595](#) entitled “Immunoassay for Free Vitamin D” issued March 12, 2024 to Future Diagnostics B.V. of Wijchen, Netherlands. Invented by Michaël Franciscus Wilhelmus Cornelis Martens of Helmond, Netherlands; George Henry Parsons of Arlington, Massachusetts; Franciscus Maria Anna Rosmalen of Wijchen, Netherlands and Leon Maria Jacobus Wilhelmus Swinkels of Bemmelen, Netherlands. **Abstract:** Disclosed is the invention to conduct immuno-adsorption of free 25(OH) vitamin D from blood or blood components, notably serum or plasma, after which the absorbed material is measured. A fluoro-alkyl surfactant is used to enhance the solubility of Vitamin D and allow the measurement of free Vitamin D.sub.2. The invention thus employs a binding protein to absorb the free 25(OH) vitamin D. Thereafter the binding protein comprising the 25-OH vitamin D is subjected to a competitive binding assay with a labeled vitamin D compound, preferably radiolabeled, fluorescent labeled, luminescent labeled, biotin labeled, gold labeled or enzyme labeled. Alternatively the immunocaptured 25-OH vitamin D can be quantitated by mass spectrometry.

[U.S. Patent No. 11,926,328](#) entitled “Tire Selection Methods and Systems Utilizing Driving Data Relating to the Driving of an Associated Vehicle” issued March 12, 2024 to Webfleet Solutions B.V. of Amsterdam, Netherlands and Bridgestone Europe NV/SA of Zaventem, Belgium. Invented by Paul Roeland Verheijen Amsterdam, Netherlands; Valerio Bortolotto of Rome, Italy; Roberto Benedetti of Rome, Italy; Federico Tecca of Rome, Italy; Jeroen Lust of Zaventem, Belgium and Jonatan Alcantarilla Calderon of Zaventem, Belgium. **Abstract:** There is disclosed a method, for determining a suitable tire for use on a vehicle, wherein the vehicle comprises an electronic device capable of

collecting driving data relating to the driving of the vehicle. The method comprises obtaining driving data (18), from the electronic device, relating to the driving of the vehicle, and determining, from the driving data, an amount of driving performed on at least one of a plurality of different road types (20). The method further comprises forming a road type driving profile (22) comprising one or more road types and the associated determined amount of driving performed thereon and selecting, from a plurality of different tires, a suitable tire (24) for the vehicle based on at least the road type driving profile.

[U.S. Patent No. 11,925,939](#) entitled "Impact Crusher" issued March 12, 2024 to Kleemann GmbH of Goppingen, Germany. Invented by Jochen Meier of Hulben, Germany and Christian Schlecht of Aalen, Germany. **Abstract:** A method of determining wear of a rotary impact crusher includes adjusting the position of an impact rocker relative to an impact rotor with an actuator by a first adjustment value until a crushing section of the impact rocker contacts an impact bar or an impact circle of the impact rotor. The first adjustment value is compared to a first reference value to make a first comparison corresponding to total wear of the impact rocker and the impact bar. The position of the impact rocker is adjusted relative to the impact rotor by a second adjustment value until the impact rocker contacts a reference measurement section. The second adjustment value is compared to a second reference value to make a comparison corresponding to wear of the impact rocker.

[U.S. Patent No. 11,926,974](#) entitled "Interchangeable Unit for Texturing Ground Surface Work and Road Construction Machine Having such an Interchangeable Unit" issued March 12, 2024 to Wirtgen GmbH of Windhagen, Germany. Invented by Sebastian Winkels of Windeck, Germany and Dieter Bungarten of Neustadt, Germany. **Abstract:** The present invention relates to an interchangeable unit (28) for material-removing work on a subsoil (U) starting from ground surface (A), the interchangeable unit (28) being designed for operational physical and functional coupling to a machine frame (12) of a road construction machine (10), the interchangeable unit (28) comprising: a housing (30), a removal tool (32), which is mounted on the housing (30) so as to be rotatable about a working axis (R) and of which a circumferential section protrudes from a working opening (30c), a drive belt pulley (62), which is rotatably mounted on the housing (30) and is able to be coupled to a drive belt (58), a transmission gear unit (76), which transmits torque and rotary motion from the drive belt pulley (62) to the removal tool (32) by reversing the direction of rotation, at least the axis of rotation (P62) of the drive belt pulley (62) running at a distance from the working axis (R). According to the invention, a working shaft assemblage (74) penetrates a housing wall (30d) of the housing (30), the working shaft assemblage (74) connecting the removal tool (32) with a working gear component (70) situated on the side of the housing wall (30d) facing away from the removal tool (32) for equidirectional joint rotation, the transmission gear unit (76) being situated between the drive belt

pulley (62) and the working gear component (70).