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U.S. Patent No. 11,517,299 entitled "Low Normal Force Retracting Device Comprising a Microtextured Surface" issued December 6, 2022 to BVW Holding AG of Cham, China. Invented by Michael Milbocker of Hollison, Massachusetts and Lukas Bluecher of Eurasberg, Germany. Abstract: Retraction of one or more three-dimensional or planar amorphous objects is provided to gain access for a procedure where the retracted elements are easily damaged by application of normal forces. For example, a surgical instrument to provide access to an organ or tissue plane. Microtextured surfaces are provided that provide immobilization of amorphous objects, the immobilization of which is characterized by low normal forces and high shear or in plane forces. The retraction device is comprised of microstructured surfaces on one or more arms. Preferably these arms are soft and flexible to minimize damage to retracted objects. In some instances, these arms resemble and are used as a nonslip tape. Alternatively, parts or whole arms of the retraction device are rigid to provide a supportive aspect. These arms may be configured around a handle. Furthermore, the microtextured aspect may be further augmented with conventional gripping surfaces, such as a sticky surface, or a surface comprised of one or more hooks or barbs. The handle means may be distributed over the retraction device, for example, holes distributed along the arms through which anchoring means are tied. The retraction device is particularly well suited for grasping wet, oily, slimy or living surfaces by applying a small nondestructive normal force.

U.S. Patent No. 11,517,654 entitled "Microstructured Discrimination Device" issued December 6, 2022 to BVW Holding AG of Cham, China. Invented by Michael Milbocker of Hollison, Massachusetts and Lukas Bluecher of Eurasberg, Germany. Abstract: The present invention discloses a microstructured discrimination device for separating hydrophobic-hydrophilic fluidic composites comprising particulate and/or fluids in a fluid flow. The discrimination is the result of surface energy gradients obtained by physically varying a textured surface and/or by varying surface chemical properties, both of which are spatially graded. Such surfaces discriminate and spatially separate particulate and/or fluids without external energy input. The device of the present invention comprises a platform having bifurcating microchannels arranged radially. The lumenal

surfaces of the microchannels may have a surface energy gradient created by varying the periodicity of hierarchically arranged microstructures along a dimension. The surface energy gradient is varied in two regions. In one pre-bifurcation region the surface energy gradient generates a fluid flow. In the other post-bifurcation region, there is a difference in surface energy proximal to the bifurcation such that different flow fractions are divided into separate channels in response to different surface energy gradients in each of the post-bifurcation channels. Accordingly, fluids of different hydrophobicity and/or particulate of different hydrophobicity are driven into separate channels by a global minimization of the fluid system energy.

U.S. Patent No. 11,517,915 entitled “Rock Processing Machine Having an Improved Control Panel” issued December 6, 2022 to Kleemann GmbH of Göppingen, Germany. Invented by Timo Hommel of Rechberghausen, Germany; Tobias Klöss of Bad Grönenbach, Germany and Reiner Köpf of Gingen an der Fils, Germany. Abstract: A rock processing machine having functional units and a control panel that switches the rock processing machine, in a starting switching operation and, in a stopping switching operation. The control panel includes a plurality of state switching elements with which, for at least one functional unit, a state transition is associated in such a way that actuation of the state switching element on the functional unit brings about a state transition. A first set of switching elements participates in the starting switching operation, and a second set of switching elements, participates in the stopping switching operation; each set being arranged in a visually perceptible spatial arrangement that corresponds to a predetermined actuation sequence.

U.S. Patent No. 11,519,141 entitled “Method for Determining the Wear State” issued December 6, 2022 to Wirtgen GmbH of Windhagen, Germany. Invented by Stefan Wagner of Bad Honnef, Germany; Cyrus Barimani of Königswinter, Germany and Günter Hähn also of Königswinter, Germany. Abstract: This invention relates to a method for determining a wear state of a chisel, a chisel holder, and/or a chisel holder replacement system equipped with a chisel and chisel holder. For this method to give the user qualitative and quantitative information about the wear, according to one embodiment of this invention, a position of at least one point of the chisel and/or the chisel holder is determined by a contactless measurement method and a corresponding measurement result is compared in a switching unit to a reference value stored in a memory device.

U.S. Patent No. 11,519,140 entitled “Self-propelled Construction Machine” issued December 6, 2022 to Wirtgen GmbH of Windhagen, Germany. Invented by Christian Berning of Zülpich, Germany and Sebastian Drumm of Rösrath, 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.