

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. 11,779,932](#) entitled “Crusher” issued October 10, 2023 to Kleemann GmbH of Göppingen, Germany. Invented by Gerd Meyer of Amstetten, Germany; Rainer Teichert of Haan, Germany and Jochen Meier of Hülben, Germany. Abstract: The invention relates to a crusher, in particular a rotary impact crusher, cone crusher or jaw crusher, having a crusher unit (10), which has a movable first crusher body (11), in particular a rotor or a crusher jaw, wherein a second crusher body (14), in particular an impact rocker or a crusher jaw, is assigned to the first crusher body (11), wherein a crushing gap (15) is formed between the crusher bodies (11, 14), wherein an overload triggering device (30) is coupled to the first crusher body or to the second crusher body, which overload triggering device has a hydraulic cylinder (20) and which overload triggering device is designed to permit a motion of the coupled crusher body (11, 14) increasing the width of the crushing gap (15), wherein the hydraulic cylinder (20) has a pressure chamber (24), which is delimited by means of a piston (23), and wherein the overload triggering device (30) has a pressure valve (31) which, in its open position, establishes a fluid-conveying connection between the pressure chamber (24) and a low-pressure area and, in the closed valve position, blocks this connection. The productivity and operational safety of such a crusher can then be increased if provision is made that the overload triggering device (30) has a high-pressure valve (40), which, as a result of an overload situation, in its open position establishes a fluid-conveying connection between the pressure chamber (24) of the hydraulic cylinder (20) and a low-pressure area and, after the overload situation has ended, is moved into a closed position to block this connection, and in that the triggering pressure required to open the pressure valve (31) is lower than the triggering pressure required to open the high-pressure valve (40).