

## 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. 11,826,761](#) entitled “High-Pressure Pump” issued November 28, 2023 to Kleemann GmbH of Göppingen, Germany. Invented by Gerd Meyer of Amstetten, Germany; Rainer Teichert of Haan, Germany; Jochen Meier of Hülben, Germany and Till Krauss of Göppingen-Faurndau, Germany. **Abstract:** A high-pressure pump for the overload protection of a jaw crusher, with an actuator unit which adjustably receives an actuation element in a housing, wherein the actuation element has at least one piston, wherein at least one actuator, tensioning cylinder and a pressure accumulator are provided, wherein the actuator unit is in fluid-conveying connection with the actuator such that in one pump stroke of the actuator unit a transfer fluid is pumped into a second chamber of the actuator and of the tensioning cylinder and the quantity of transfer medium displaced from the actuator, and the tensioning cylinder during the pump stroke is temporarily stored in a pressure accumulator.

[U.S. Patent No. 11,826,685](#) entitled “Oil Coalescing Device” issued November 28, 2023 to Des-Case Corporation of Goodlettsville, Tennessee. Invented by Cody Curtsinger and Houston Hatchett of Nashville, Tennessee. **Abstract:** Apparatuses, systems, and methods are provided for and in conjunction with an external oil coalescing apparatus for receiving an air flow containing oil; a honeycomb material for coalescing oil contained in the air flow; a first end for receiving the air flow containing oil; and a second for emitting air from the apparatus.

[U.S. Patent No. 11,828,474](#) entitled “Methods and System for Demand-Based Control of a Combination Boiler” issued November 28, 2024 to Lochinvar, LLC of Lebanon, Tennessee. Invented by Curtis George Gagne of Smyrna, Tennessee. **Abstract:** A combination boiler provides heated water to a boiler loop and heated domestic hot water (DHW) to a DHW loop. A primary heat exchanger is connected to the boiler loop. A burner provides heat to the primary heat exchanger and an input fan supplies a fuel and air mixture to the burner. A secondary heat exchanger transfers heat energy from the boiler loop to a domestic water loop. A controller determines a boiler loop flow rate. The controller measures an input temperature of the boiler loop, an output temperature of



the boiler loop, and a DHW output temperature of the domestic water loop. The controller determines a DHW input temperature and estimates a DHW flow rate. The input fan speed is initiated or operated according to a required heat output of the burner corresponding to the DHW flow rate.