

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. 11,606,908 entitled "Intermittent Knotter Gear" issued March 21, 2023 to Deere & Company of Moline, Iowa. Invented by Joshua Pasa of Centerville, Iowa; Kyle Teach of Outtumwa, Iowa; Eric Lang of Vinton, Iowa; Carl Demulder of Ankeny, Iowa and David Rotole of Bloomfield, Iowa. Abstract: A knotter drive apparatus for a baler includes a knotter gear drive shaft having a drive shaft axis and a shaft outside diameter. A plurality of knotter assemblies are mounted on the knotter gear drive shaft. Each assembly includes a first knotter gear sector including a first sector hub portion and a first sector radial portion. The first sector hub portion includes a central passage at least partly defined in the first sector hub portion for receiving the knotter gear drive shaft. The first sector radial portion extends radially outward from the first sector hub portion relative to the drive shaft axis, and has defined thereon a plurality of intermittent gear tooth segments. The first sector hub portion has a circumferential gap defined therein greater than the shaft outside diameter such that the first knotter gear sector is removable radially, relative to the drive shaft axis, from the knotter gear drive shaft.