

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. 11,541,703 entitled "Pneumatic Tire Equipped with a Transponder" issued January 3, 2022 to BRIDGESTONE EUROPE NV/SA of Zaventem, Belgium. Invented by Marco Pedrinelli; Emiliano Sabetti; Mauro Mirabile and Emanuele Rosa all of Roma, Italy. Abstract: A pneumatic tire (1) having: a toroidal carcass (2), which is comprised of a body ply (3) partially collapsed onto itself and therefore having two lateral flaps; two annular beads (4), each of which is surrounded by the body ply (3) and has a bead core (5) and a bead filler (6); an annular tread (7); a pair of sidewalls (11) arranged externally to the body ply (3) between the tread (7) and the beads (4); a pair of abrasion gum strips (12) arranged externally to the body ply (3) under the sidewalls (13) and at the beads (4); and a transponder (13) which is arranged in contact with the body ply (3) at a flap of the body ply (3) and is located below an edge (19) of the body ply (3) between the edge (19) of the body ply (3) and the bead (4).

U.S. Patent No. 11,545,293 entitled "Bobbin for Edge-Mounted Magnetic Core" issued January 3, 2022 to Universal Lighting Technologies, Inc. of Madison, Alabama. Invented by Mike LeBlanc of Huntsville, Alabama; Donald Folker of Madison, Alabama; Dane Sutherland of Madison, Alabama and Wei Xiong also of Madison, Alabama. Abstract: An edge mount magnetic component includes a bobbin and two E-core halves. The bobbin is configured to receive the two E-core halves when body portions of the two E-core halves are positioned vertically. The bobbin includes a first outer flange, a second outer flange, and a passageway spanning therebetween. The bobbin further includes first, second, third, and fourth pin supports. The first and second pin supports are connected to an outer surface of the first end flange and are spaced apart by at least a width of the passageway. The third and fourth pin supports are connected to an outer surface of the second end flange and are spaced apart by at least the width of the passageway. The bobbin further includes slots for routing a winding to a pin and includes walls to ensure the winding is electrically separated from the E-core halves.

<u>U.S. Patent No. 11,546,979</u> entitled "Dynamic Valley Sensing Method for Double Flyback LED Driver" Universal Lighting Technologies, Inc. of Madison, Alabama. Invented by



Scott Price; Wei Xiong and Dane Sutherland all of Madison, Alabama. Abstract: A two-stage driver supplies current to a light emitting diode (LED) load. The driver includes a first stage and a second stage. The second stage is configured to generate a desired current through the LED load. The second stage has a flyback converter having a flyback transformer with a primary winding and a secondary winding. The primary winding is turned on and off by a gating signal. An induced voltage in the secondary winding rings when a current in the secondary winding is discharged. The flyback converter is configured to turn on the primary winding only during a detected valley in the ringing of the secondary winding. If the primary winding is turned on during a detected valley different from the previous detected valley, a valley jump is detected and the switching frequency is adjusted.