

Title (en)

Starter for automotive vehicle comprising an improved pinion

Title (de)

Anlasser für Kraftfahrzeug mit verbessertem Ritzel

Title (fr)

Démarreur de véhicule automobile comportant un lanceur perfectionné.

Publication

EP 0924425 B1 20030528 (FR)

Application

EP 98123487 A 19981214

Priority

FR 9716111 A 19971217

Abstract (en)

[origin: EP0924425A1] The drive pinion (20) and thrust gear (19) are separate parts which are held one against the other through a conical friction surface (40) by a thrust spring (74). When the starter motor is activated the helical gear pushes the two surfaces tightly together as the pinion drive gear engages on the engine flywheel. When the engine fires the helical gears cause the thrust gear to pull away from the pinion slightly which stops the engine driving the starter motor.

IPC 1-7

F02N 15/02; **F02N 15/06**

IPC 8 full level

F02N 15/02 (2006.01); **F02N 15/06** (2006.01); **F02N 15/08** (2006.01)

CPC (source: EP US)

F02N 15/025 (2013.01 - EP US); **F02N 15/063** (2013.01 - EP US); **Y10T 74/134** (2015.01 - EP US)

Cited by

FR2843176A1; FR2978501A1; WO2010057468A3; WO2011147671A3; WO2013014388A3; WO03072936A1; WO2004013489A3; EP2577039B1

Designated contracting state (EPC)

DE ES GB IT

DOCDB simple family (publication)

EP 0924425 A1 19990623; **EP 0924425 B1 20030528**; BR 9805357 A 19991109; DE 69815037 D1 20030703; DE 69815037 T2 20040115; ES 2200261 T3 20040301; FR 2772433 A1 19990618; FR 2772433 B1 20000204; JP H11241669 A 19990907; US 6237432 B1 20010529

DOCDB simple family (application)

EP 98123487 A 19981214; BR 9805357 A 19981216; DE 69815037 T 19981214; ES 98123487 T 19981214; FR 9716111 A 19971217; JP 35761898 A 19981216; US 21500698 A 19981217