

Title (en)

Freewheel device in a start device for combustion engines

Title (de)

Freilaufeinrichtung in einer Startvorrichtung für Brennkraftmaschinen

Title (fr)

Dispositif de roue libre dans un dispositif de démarrage pour moteurs à combustion interne

Publication

EP 2428674 B1 20200624 (DE)

Application

EP 11178038 A 20110819

Priority

DE 102010040531 A 20100909

Abstract (en)

[origin: EP2428674A1] The device (2) has a driver (10) connected with an armature shaft (3) and an output shaft (4) over a gearbox (6). The output shaft is formed as a carrier of a starter pinion (5). A section of the driver forms a planetary carrier (11) of the gearbox. The planetary carrier and a driver disk (12) that is connected with the output shaft are formed as separate components coupled in a moment-transmitting manner. The planetary carrier made of sintered plastic or sintered steel and the disk are made of different materials. Boreholes are attached into the planetary carrier to retain an axle bolt (9).

IPC 8 full level

F02N 15/02 (2006.01); **F02N 15/04** (2006.01); **F02N 15/06** (2006.01)

CPC (source: EP)

F02N 15/022 (2013.01); **F02N 15/043** (2013.01); **F02N 15/062** (2013.01); **F02N 15/023** (2013.01); **F02N 15/025** (2013.01); **F02N 15/026** (2013.01); **F02N 15/046** (2013.01)

Citation (examination)

US 2009205464 A1 20090820 - TAKEUCHI HIROKI [JP], et al

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

EP 2428674 A1 20120314; **EP 2428674 B1 20200624**; CN 102536579 A 20120704; CN 102536579 B 20160511; DE 102010040531 A1 20120315; HU E050649 T2 20201228

DOCDB simple family (application)

EP 11178038 A 20110819; CN 201110348830 A 20110907; DE 102010040531 A 20100909; HU E11178038 A 20110819