

Title (en)
MULTI-SPEED GEARBOX

Title (de)
MEHRSTUFENGETRIEBE

Title (fr)
BOÎTE DE VITESSES MULTI-ÉTAGÉE

Publication
EP 2841799 A1 20150304 (DE)

Application
EP 13709098 A 20130313

Priority
• DE 102012207092 A 20120427
• EP 2013055059 W 20130313

Abstract (en)
[origin: WO2013159990A1] The invention relates a four-speed multi-speed gearbox in which a sun gear (41) of a fourth planetary gear set (4) is rigidly connected to the housing (72), a ring gear (13) of a first planetary gear set (1) is permanently connected to a ring gear (43) of the fourth planetary gear set (4), a sun gear (11) of the first planetary gear set (1) and a sun gear (21) of a second planetary gear set (2) can be coupled to the housing (72) by means of a first brake (51), a planet carrier (12) of the first planetary gear set (1) can be coupled to the housing (72) by means of a second brake (52) and the output shaft (71) can be coupled to the planet carrier (42) of the fourth planetary gear set (4) by means of a first clutch (61). By varying other clutches within the multi-speed gearbox, a set of gearboxes which have similar characteristics are provided.

IPC 8 full level
F16H 3/66 (2006.01)

CPC (source: CN EP US)
F16H 3/66 (2013.01 - CN EP US); **F16H 2003/445** (2013.01 - EP US); **F16H 2200/0065** (2013.01 - EP US); **F16H 2200/0082** (2013.01 - US); **F16H 2200/2012** (2013.01 - CN EP US); **F16H 2200/2046** (2013.01 - EP US); **F16H 2200/2094** (2013.01 - EP US); **F16H 2200/2097** (2013.01 - EP US)

Citation (search report)
See references of WO 2013159990A1

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

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
WO 2013159990 A1 20131031; CN 104220778 A 20141217; CN 104220778 B 20161116; DE 102012207092 A1 20131031; DE 102012207092 B4 20220505; EP 2841799 A1 20150304; US 2015111689 A1 20150423; US 9285018 B2 20160315

DOCDB simple family (application)
EP 2013055059 W 20130313; CN 201380019910 A 20130313; DE 102012207092 A 20120427; EP 13709098 A 20130313; US 201314396088 A 20130313