

Title (en)

CLUTCH OPERATION EFFORT REACTIVE FORCE GENERATOR

Title (de)

REAKTIVER KRAFTGENERATOR MIT KUPPLUNGSBETÄTIGUNGSAUFWAND

Title (fr)

GÉNÉRATEUR DE FORCE RÉACTIVE D'EFFORT DE MANOEUVRE D'EMBRAYAGE

Publication

EP 4116795 A1 20230111 (EN)

Application

EP 22174238 A 20220519

Priority

JP 2021113537 A 20210708

Abstract (en)

OBJECTIt is an object to a clutch operation effort reactive force generator which can be reduced in size thereof, is capable of minimizing the volume of space for installation of the clutch operation effort reactive force generator, and developing a simulated reactive force as a function of an amount by which the clutch pedal is moved by an operator.SOLVING MEANSA clutch operation effort reactive force generator 5 includes a supporting member 10, a cam follower 16, and a coil spring 17. The supporting member 10 includes a cam plate 13 and a roller 16B. The cam plate 13 has a cam face 13A and is disposed to be movable on the supporting member 10. The roller 16B is arranged to make contact with the cam face 13A. The coil spring 17 is arranged between the cam follower 16 and the cam plate 13 and works to produce a biasing force to urge the cam follower 16 and the cam plate 13 away from each other in a direction of movement of the cam plate 13. The movement of the cam plate 13 causes a location of the contact between the roller 16B and the cam face 13A to be changed to move the cam follower 16 in the direction of movement of the cam plate 13. This structure enables the clutch operation effort reactive force generator 5 to be reduced in size thereof, minimizes the volume of space for installation of the clutch operation effort reactive force generator 5, and is capable of developing a simulated reactive force as a function of an amount by which the clutch pedal 4 is moved by an operator.

IPC 8 full level

G05G 1/46 (2008.04)

CPC (source: EP)

G05G 1/46 (2013.01)

Citation (applicant)

JP H08161069 A 19960621 - TOYOTA MOTOR CORP

Citation (search report)

- [XA] US 2005252334 A1 20051117 - PODKOPAYEV VADYM [CA]
- [XA] US 2991862 A 19610711 - GLESMANN HERBERT C
- [A] CA 2296612 A1 20000720 - TALARICO JOE [CA], et al
- [A] US 6837356 B2 20050104 - TULACZKO BOLESŁAW [DE], et al
- [A] EP 3547070 A1 20191002 - VALEO EMBRAYAGES [FR]

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

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

EP 4116795 A1 20230111; EP 4116795 B1 20240306; JP 2023009890 A 20230120

DOCDB simple family (application)

EP 22174238 A 20220519; JP 2021113537 A 20210708