Title (en)

INFINITELY VARIABLE TRANSMISSION WITH UNIFORM INPUT-TO-OUTPUT RATIO THAT IS NON-DEPENDENT ON FRICTION

Title (de)

STUFENLOSES GETRIEBE MIT EINHEITLICHEM KUPPLUNGSUNABHÄNGIGEM EINGANG-ZU-AUSGANG-VERHÄLTNIS

Title (fr)

TRANSMISSION À VARIATION INFINIE À RAPPORT ENTRÉE-SORTIE UNIFORME QUI N'EST PAS DÉPENDANTE DU FROTTEMENT

Publication

**EP 4103863 A4 20240515 (EN)**

Application

**EP 21752950 A 20210212**

Priority

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• US 2021017984 W 20210212

Abstract (en)

[origin: WO2021163583A1] The present disclosure is an infinitely variable transmission that is non-dependent on friction. It can be used in high torque applications, offering a steady and uniform output for a steady and uniform input. Since it allows a co-axial input and output, by using a planetary gear system the output can be made continuous from forward to reverse. It uses a "scotch-yoke" mechanism to convert rotational motion to a linear reciprocating motion. The linear distance of this reciprocating motion - "stroke" is changed by altering the crankpin location of the scotch-yoke mechanism. This reciprocating motion is converted to a rocking motion by using a "rack and pinion" and later converted to a unidirectional motion via a One- Way-Bearing. Sets of Geneva wheel system are used to achieve a steady and uniform output, along with gear systems employing a simple mechanism to change the ratio between the input and output of the transmission.

IPC 8 full level

**F16H 29/20** (2006.01); **F16H 19/04** (2006.01); **F16H 27/06** (2006.01)

CPC (source: EP KR)

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Citation (search report)

• [A] JP S5988557 U 19840615
• [A] US 2015662 A 19351001 - BRIDGES EDWARD G
• [A] US 2019003564 A1 20190103 - RAJENDRAN RAJA RAMANUJAM [US], et al
• [L] JAHR A: "ES IST KEIN FORMSCHLUESSIGES STUFENLOSES GETRIEBE MOEGLICH", ANTRIEBSTECHNIK, VEREINIGTE FACHVERLAGE, MAINZ, DE, vol. 28, no. 1, 1 January 1989 (1989-01-01), pages 45/46, XP001160727, ISSN: 0722-8546
• [L] DANIEL H: "IST EIN STUFENLOSES ECHT FORMSCHLUESSIGES GETRIEBE MOEGLICH?", ANTRIEBSTECHNIK, VEREINIGTE FACHVERLAGE, MAINZ, DE, vol. 23, no. 5, 1 January 1984 (1984-01-01), pages 49/50, XP001160734, ISSN: 0722-8546
• See also references of WO 2021163583A1

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)

**WO 2021163583 A1 20210819**; CA 3165829 A1 20210819; CA 3173031 A1 20211216; CN 114423966 A 20220429; EP 4103863 A1 20221221; EP 4103863 A4 20240515; EP 4162175 A1 20230412; JP 2023512775 A 20230329; JP 2023529149 A 20230707; KR 20230020526 A 20230210; WO 2021252402 A1 20211216

DOCDB simple family (application)

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