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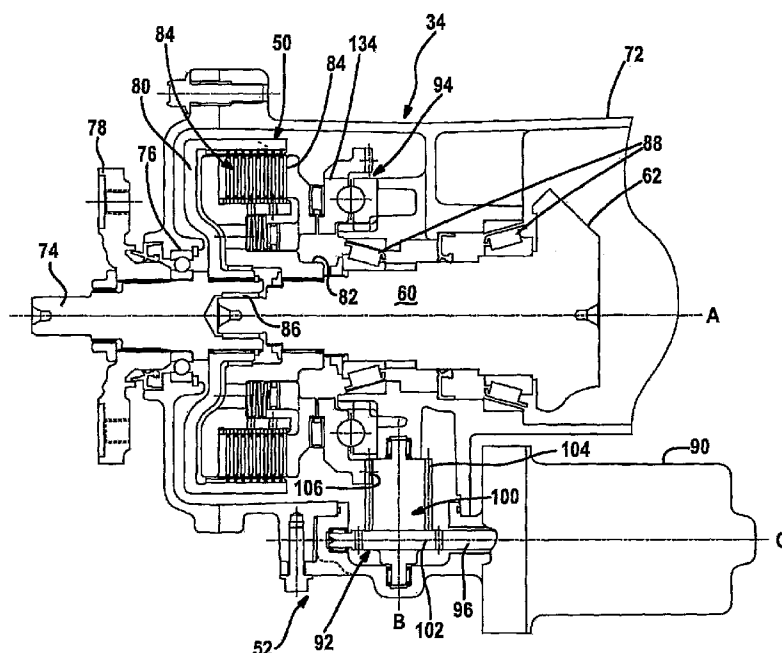
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[Continued on next page]

(54) Title: POWER-OPERATED CLUTCH ACTUATOR FOR TORQUE COUPLINGS



(57) Abstract: A torque transfer mechanism is provided for controlling the magnitude of a clutch engagement force exerted on a multi-plate clutch assembly that is operably disposed between a first rotary and a second rotary member. The torque transfer mechanism includes a power-operated face gear clutch actuator for generating and applying a clutch engagement force on the clutch assembly.

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— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

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# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 06/29506

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(8): F16D 19/00, 27/00, 37/02 (2007.02)

USPC: 192/84.6

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

USPC: 192/84.6

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

USPC: 192/70.23, 82R, 93A, 93R, 94; 180/ 247, 248, 249; 475/223 - text word limited - see below

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PubWEST (USPT, PGPB, EPO, JPO)

Search Terms: clutch and motor and (clutch adj3 (actuator or operator)) and worm and pinion and cam and control

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 6,851,537 B2 (BOWEN) 08 February 2005 (08.02.2005), entire document, especially Figures 1-4	1-3, 7-17 and 21-26 ----- 4-6, 18-20 and 27
Y	US 6,736,233 B2 (BEISCHLINE et al) 18 May 2004 (18.05.2004), Figure 17	4-6, 18-20 and 27
A,P	US 6,932,204 B2 (DOLAN) 23 August 2005 (23.08.2005), Figures 2 and 3	1, 15 and 27
A	US 6,402,652 B1 (FLEYTMAN et al) 11 June 2002 (11.06.2002), Figures 1, 2 and 24	1, 15 and 27
A	US 6,174,096 B1 (HARRIS) 16 January 2001 (16.01.2001), Figure 4	1, 15 and 27
A	US 5,423,235 A (BOTTERILL et al) 13 June 1995 (13.06.1995), Figure 1	1, 15 and 27
A	US 5,407,024 A (WATSON et al) 18 April 1995 (18.04.1995), Figure 2	1, 15 and 27

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