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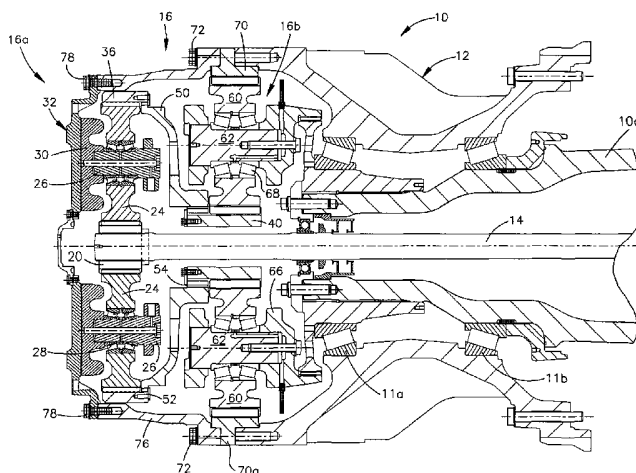
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- (71) Applicant (for all designated States except US): EUCLID-HITACHI HEAVY EQUIPMENT, LTD. [US/US]; 22221 St. Clair Avenue, Cleveland, OH 44117 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): CISZAK, Robert, J. [US/US]; 26606 Osborn Road, Bay Village, OH 44140 (US). PLEICHNER, Joe [US/US]; 780 Meadowlark Road, Painesville Township, OH 44077 (US). POCHATILA, Paul, D. [US/US]; 9241 Hidden Glen Drive, Mentor, OH 44060 (US).
- (74) Agent: HLAVKA, John, R.; Watts, Hoffmann, Fisher & Heinke Co., L.P.A., 1100 Superior Avenue, Suite 1750, Cleveland, OH 44114 (US).
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(54) Title: AXLE ASSEMBLY



(57) Abstract: An axle assembly including a housing, a tire supporting hub mounted for rotation with respect to the housing, a drive axle and a planetary unit for coupling the drive axle to the tire supporting hub, such that rotation in the axle produces rotation in the hub. The planetary unit includes a sun gear, at least one planet gear and a ring gear, with the planet gear being in co-meshing engagement with the sun and ring gears. Damping material is used to inhibit or reduce the transmission of vibrations produced by the gear meshes during vehicle operation to the planetary unit cover. In one construction, the planetary unit includes a cover portion and a carrier portion with damping material, such as copper, disposed between the portions. In another construction, bushings made from damping material, such as brass or bronze, are disposed between the planetary gear (or gears) and the pin member which supports the planetary gear. Since the pins form part of the cover/carrier, vibrations generated by gear meshes in the planetary unit are inhibited or dissipated by the bushings and do not travel from the planet gears to the pin members and/or to the planetary cover.

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No.
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A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : F16H 03/44; B60K 17/16

US CL : 475/323, 347, 901; 180/372, 378

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)

U.S. : 475/221, 253, 323, 346, 347, 901; 180/371, 372, 378

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

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

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 3,770,074 A (SHERMAN) 6 November 1973, Fig. 1	1-8, 10-12
Y	US 1,818,447 A (BAKER) 11 August 1931, page 1	1-8, 10-12
A	US 2,802,542 A (GERST) 13 August 1957, Fig. 1	1, 5, 10
A	US 4,020,716 A (TOTH et al) 3 May 1977, Fig. 1	1, 5, 10
A	US 4,380,274 A (ABRAHAM et al) 19 April 1983, Fig. 1	1, 5, 10
A,P	US 6,458,057 B2 (MASSACCESSI et al) 1 October 2002, Fig. 1	1, 5, 10

Further documents are listed in the continuation of Box C. See patent family annex.

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"O" document referring to an oral disclosure, use, exhibition or other means	
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Name and mailing address of the ISA/US
Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer
ROGER PANG

Telephone No. (703) 305-0445