

Title (en)

GEAR PUMP AND PRINTING APPARATUS PROVIDED WITH SAME

Title (de)

ZAHNRADPUMPE UND DAMIT AUSGESTATTETE DRUCKVORRICHTUNG

Title (fr)

POMPE À ENGRENAGES ET APPAREIL D'IMPRESSION DOTÉ DE CETTE DERNIÈRE

Publication

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Application

EP 16779779 A 20160414

Priority

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- JP 2016002032 W 20160414

Abstract (en)

[origin: WO2016166985A1] The present invention relates to a gear pump or the like able to effectively prevent excess heat generation between a gear shaft and a journal bearing. A gear pump (1) that lubricates gear shafts (14, 15) on which gears (12, 13) are attached and journal bearings (62, 63) that rotatably support the gear shafts (14, 15) with an ultraviolet-curable ink that is a transport target, in which a width diameter ratio that is a ratio of a bearing length of the journal bearings (62, 63) to the shaft diameter of the gear shafts (14, 15) is 0.5 to 2.0, and a clearance ratio that is a ratio of a radial clearance between the gear shafts (14, 15) and the journal bearings (62, 63) to the shaft radius of the gear shafts (14, 15) is 0.0009 to 0.01.

IPC 8 full level

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F04C 2240/60 (2013.01); **F04C 2270/17** (2013.01)

Citation (search report)

- [X] JP 2012021516 A 20120202 - SEIKO EPSON CORP
- [XAY] US 2011148957 A1 20110623 - PARK DANIEL CLARK [US], et al
- [XYI] US 6053718 A 20000425 - SCHMIDT EUGEN [DE], et al
- [XAI] JP 2011179329 A 20110915 - HEISHIN PUMP WORKS
- [XAI] JP 2008014292 A 20080124 - TOYOTA IND CORP
- [XAI] JP 2007177735 A 20070712 - NTN TOYO BEARING CO LTD
- [X] EP 0828077 A1 19980311 - EASTMAN KODAK CO [US]
- [X] US 5178528 A 19930112 - MALFIT JEAN [FR]
- [X] JP H03202687 A 19910904 - MORO KAZUO
- See references of WO 2016166985A1

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