

Title (en)

Multi-speed winch with constant mesh gearing system

Title (de)

Winde mit mehreren Gängen und dauerend ineinandergreifenden Zahnrädern

Title (fr)

Treuil à plusieurs rapports et pignont constamment en prise

Publication

**EP 0744374 A3 19971105 (EN)**

Application

**EP 96107297 A 19960508**

Priority

US 44727595 A 19950522

Abstract (en)

[origin: EP0744374A2] A constant mesh gearing system for a multi-speed winch (10) which allows shifting of gear ratios for varying operating properties. The gearing system incorporates at least two different sized crank gears (32,34) coaxially mounted to a crankshaft (28). Each of the crank gears (32,34) are in constant mesh engagement with drive gears (54,56) mounted to a drive shaft (50). The other end of the drive shaft (50) includes a ratchet gear (58) drivably engaging the winch drum (18). A ratchet pawl (62) with a standoff link (66) locks the ratchet gear (58) against rotation in one direction. Upon cranking the standoff forces the pawl (62) away from the ratchet gear (58) for noiseless cranking of the winch (10). The crankshaft (28) of the winch (10) is longitudinally shiftable to selectively engage either of the crank gears (32,34). The shaft (28) includes detents (44) engageable by a spring-biased ball bearing (46) to prevent inadvertent longitudinal movement of the crankshaft (28). The crankshaft (28) also includes a drive tooth (40) selectively engageable with the crank gears (32,34). Upon longitudinal shifting of the crankshaft (28), different gear ratios may be selected for operation of the winch (10). <IMAGE>

IPC 1-7

**B66D 1/04**

IPC 8 full level

**B66D 1/04** (2006.01)

CPC (source: EP)

**B66D 1/04** (2013.01)

Citation (search report)

- [A] GB 2127917 A 19840418 - SOUTHAM ERIC
- [A] US 4566674 A 19860128 - EBEY EDWARD [US], et al
- [A] CH 115994 A 19260916 - DENZLER & BURKHARDT [CH]
- [A] SU 1754634 A1 19920815 - MOGILEVSKIJ MASH [SU]
- [A] SU 1759784 A1 19920907 - UK NII STANKOV INSTR [SU]

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