

CPC**COOPERATIVE PATENT CLASSIFICATION****B66D****CAPSTANS; WINCHES; TACKLES, e.g. PULLEY BLOCKS; HOISTS**

(winding or unwinding ropes or cables for feeding or storage purposes [B65H](#) ; rope or cable winding or unwinding mechanisms for lifts [B66B](#))

NOTE

This subclass covers:

rope, cable or chain winding or unwinding mechanisms for moving all loads except lift cages, e.g. winches for dredges;

braking or detent devices characterised by their application for retarding or preventing rotary movement of a winding drum or barrel

WARNING

The following IPC groups are not used in the CPC scheme. Subject matter covered by these groups is classified in the following CPC groups:

[B66D 1/395](#) covered by [B66D 1/36](#), [B66D 1/50](#)

Guidance heading:**B66D 1/00**

Rope, cable, or chain winding mechanisms; Capstans (portable or mobile lifting or hauling appliances [B66D 3/00](#))

B66D 1/005

. {Attaching winches to vehicle wheels }

B66D 1/02

. Driving gear

B66D 1/04

.. manually operated

B66D 1/06

... Safety cranks for preventing unwanted crank rotation and subsequent lowering of the loads

B66D 1/08

.. incorporating fluid motors

B66D 1/10

... Steam driving gear

B66D 1/12

.. incorporating electric motors

B66D 1/14

.. Power transmissions between power sources and drums or barrels {including brakes, one-way brakes, one-way clutches, clutches activated alternately with brakes, fixed ratio gearing unless otherwise provided for in [B66D 1/16](#) to [B66D 1/24](#) }

B66D 1/16

... the drums or barrels being freely rotatable { e.g. having a clutch activated independently of a brake ([B66D 1/20](#), [B66D 1/22](#), [B66D 1/24](#) take precedence; clutches activated alternately with brakes [B66D 1/14](#), slip couplings [B66D 1/14](#)) }

B66D 1/18

.... and the power being transmitted from a continuously operating and irreversible prime mover {i.e. an internal combustion engine e.g. on a motor vehicle or a portable winch }

B66D 1/20

... Chain, belt, or friction drives, e.g. incorporating sheaves {of fixed or variable ratio }

- B66D 1/22 . . . Planetary or differential gearings (for actuating grab buckets [B66D 1/70](#)) {i.e. with planet gears having movable axes of rotation }
- B66D 1/225 {variable ratio or reversing gearing (fixed ratio gearing [B66D 1/22](#)) }
- B66D 1/24 . . . for varying speed or reversing direction of rotation of drums or barrels {i.e. variable ratio or reversing gearing ([B66D 1/225](#) takes precedence) }
- B66D 1/26 . . . having several drums or barrels
- B66D 1/28 . . . Other constructional details
- B66D 1/30 . . . Rope, cable, or chain drums or barrels
- B66D 1/34 . . . Attachment of ropes or cables to drums or barrels
- B66D 1/36 . . . Guiding, or otherwise ensuring winding in an orderly manner, of ropes, cables, or chains
- B66D 1/365 . . . {by means of pivotably mounted drums or barrels }
- B66D 1/38 . . . by means of guides movable relative to drum or barrel
- B66D 1/39 . . . by means of axially-movable drums or barrels { (pivotably mounted drums or barrel [B66D 1/365](#)) }
- B66D 1/40 . . . Control devices
- B66D 1/42 . . . non-automatic
- B66D 1/44 pneumatic or hydraulic
- B66D 1/46 electric
- B66D 1/48 . . . automatic
- B66D 1/485 {electrical }
- B66D 1/50 for maintaining predetermined rope, cable, or chain tension, e.g. in ropes or cables for towing craft, in chains for anchors; Winding or mooring winch-cable tension control
- B66D 1/505 {electrical }
- B66D 1/52 for varying rope or cable tension, e.g. when recovering craft from water
- B66D 1/525 {electrical }
- B66D 1/54 . . . Safety gear
- B66D 1/56 . . . Adaptations of limit switches
- B66D 1/58 . . . responsive to excess of load
- B66D 1/60 . . . adapted for special purposes
- B66D 1/605 . . . {scaffolding winches ([B66D 1/74](#) takes precedence) }
- B66D 1/62 . . . for actuating grab buckets (electrical control in cranes [B66C 13/32](#))
- B66D 1/64 . . . by means of a single rope or chain
- B66D 1/66 . . . driven by a single motor
- B66D 1/68 . . . driven by two motors
- B66D 1/70 . . . driven through planetary or differential gearings
- B66D 1/72 . . . Anchor-chain sprockets; Anchor capstans
- B66D 1/74 . . . Capstans
- B66D 1/7405 . . . {having two or more drums providing tractive force }
- B66D 1/741 {and having rope storing means }

- B66D 1/7415 . . . {Friction drives, e.g. pulleys, having a cable winding angle of less than 360 degrees }
- B66D 1/7421 . . . { having a vertical rotation axis }
- B66D 1/7426 { driven by motor only }
- B66D 1/7431 { driven manually only }
- B66D 1/7436 { drivable by both motor and manually }
- B66D 1/7442 . . . { having a horizontal rotation axis }
- B66D 1/7447 { driven by motor only }
- B66D 1/7452 { driven manually only }
- B66D 1/7457 { drivable by both motor and manually }
- B66D 1/7463 . . . { Accessories }
- B66D 1/7468 { Handles }
- B66D 1/7473 { with locking means }
- B66D 1/7478 { Powered handles }
- B66D 1/7484 . . . { Details concerning gearing arrangements, e.g. multi-speed }
- B66D 1/7489 . . . { having a particular use, e.g. rope ascenders }
- B66D 1/7494 . . . { Self-tailing capstans }
- B66D 1/76 . . . having auxiliary drums or barrels for storing the ropes or cables
- B66D 1/78 . . . for shunting, e.g. in marshalling yards
- B66D 1/80 . . for scrapers
- B66D 1/82 . . for slewing and hoisting by means of derricks

B66D 3/00 Portable or mobile lifting or hauling appliances

- B66D 3/003 . {using two or more cooperating endless chains }
- B66D 3/006 . {Power actuated devices operating on ropes, cables, or chains for hauling in a mainly horizontal direction ([B66D 3/003](#) takes precedence) }
- B66D 3/02 . Manually-operated, e.g. lever-actuated, devices operating on ropes, cables, or chains for hauling in a mainly horizontal direction ([B66D 3/04](#), [B66D 3/12](#) take precedence)
- B66D 3/04 . Pulley blocks or like devices in which force is applied to a rope, cable, or chain which passes over one or more pulleys, e.g. to obtain mechanical advantage ([sheaves F16H 55/00](#))
- B66D 3/043 . . {Block and tackle system with variable number of cable parts }
- B66D 3/046 . . {Openable pulley blocks }
- B66D 3/06 . . with more than one pulley
- B66D 3/08 . . . Arrangements of sheaves
- B66D 3/10 . . . Applications of braking or detent devices
- B66D 3/12 . Chain or like hand-operated tackles with or without power transmission gearing between operating member and lifting rope, chain or cable
- B66D 3/14 . . lever operated
- B66D 3/16 . . operated by an endless chain passing over a pulley or a sprocket
- B66D 3/18 . Power-operated hoists

- B66D 3/20 .. with driving motor, e.g. electric motor, and drum or barrel contained in a common housing
- B66D 3/22 ... with variable-speed gearings between driving motor and drum or barrel
- B66D 3/24 .. Applications of limit switches
- B66D 3/26 .. Other details, e.g. housings

B66D 5/00 Braking or detent devices characterised by application to lifting or hoisting gear, e.g. for controlling the lowering of loads (for pulley blocks [B66D 3/10](#))

- B66D 5/02 . Crane, lift hoist, or winch brakes operating on drums, barrels, or ropes
- B66D 5/023 .. {Cooling of brakes (in general [F16D](#)) }
- B66D 5/026 .. {Fluid-resistance brakes }
- B66D 5/04 .. actuated by centrifugal force
- B66D 5/06 .. with radial effect ([B66D 5/20](#) takes precedence)
- B66D 5/08 ... embodying blocks or shoes
- B66D 5/10 ... embodying bands
- B66D 5/12 .. with axial effect ([B66D 5/22](#) takes precedence)
- B66D 5/14 ... embodying discs
- B66D 5/16 .. for action on ropes or cables
- B66D 5/18 .. for generating braking forces which are proportional to the loads suspended;
Load-actuated brakes
- B66D 5/20 ... with radial effect
- B66D 5/22 ... with axial effect
- B66D 5/24 .. Operating devices
- B66D 5/26 ... pneumatic or hydraulic
- B66D 5/28 specially adapted for winding gear, e.g. in mining hoists
- B66D 5/30 ... electrical
- B66D 5/32 . Detent devices
- B66D 5/34 .. having latches

Guidance heading:

B66D 2700/00 Capstans, winches or hoists

- B66D 2700/01 . Winches, capstans or pivots
- B66D 2700/0108 .. with devices for paying out or automatically tightening the cable
- B66D 2700/0116 .. Manually or spring operated winches
- B66D 2700/0125 .. Motor operated winches
- B66D 2700/0133 ... Fluid actuated
- B66D 2700/0141 ... Electrically actuated
- B66D 2700/015 ... Actuated by chain, belt or by friction
- B66D 2700/0158 ... Hydraulically controlled couplings or gearings

- B66D 2700/0166 . . . Winches with multiple drums or with drums with multiple parts of different diameter
- B66D 2700/0175 with adjacent drums mounted on a single shaft with a common coupling member
- B66D 2700/0183 . . Details, e.g. winch drums, cooling, bearings, mounting, base structures, cable guiding or attachment of the cable to the drum
- B66D 2700/0191 . . . Cable guiding during winding or paying out
- B66D 2700/02 . Hoists or accessories for hoists
- B66D 2700/021 . . Hauling devices
- B66D 2700/023 . . Hoists
- B66D 2700/025 . . . motor operated
- B66D 2700/026 . . Pulleys, sheaves, pulley blocks or their mounting
- B66D 2700/028 . . . Pulley blocks with multiple sheaves
- B66D 2700/03 . Mechanisms with latches or braking devices in general for capstans, hoists or similar devices as well as braking devices actuated electrically or by fluid under pressure
- B66D 2700/035 . . Fluid operated braking devices
- B66D 2700/05 . Brakes with mechanisms with latches for hoists or similar devices
- B66D 2700/07 . Brakes with axial thrust for winches, hoists or similar devices