

**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](#)

**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; Warping 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
<b>B66D 5/00</b>	<b>Braking or detent devices characterised by application to lifting or hoisting gear, e.g. for controlling the lowering of loads ( for pulley blocks <a href="#">B66D 3/10</a> )</b>
B66D 5/02	. Crane, lift hoist, or winch brakes operating on drums, barrels, or ropes
B66D 5/023	.. { Cooling of brakes ( in general <a href="#">F16D</a> ) }
B66D 5/026	.. { Fluid-resistance brakes }
B66D 5/04	.. actuated by centrifugal force
B66D 5/06	.. with radial effect ( <a href="#">B66D 5/20</a> takes precedence )
B66D 5/08	... embodying blocks or shoes
B66D 5/10	... embodying bands
B66D 5/12	.. with axial effect ( <a href="#">B66D 5/22</a> 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
<b>B66D 2700/00</b>	<b>Capstans, winches or hoists</b>
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