

**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; 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 ( <a href="#">B66D 3/003</a> 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 ( <a href="#">B66D 3/04</a> , <a href="#">B66D 3/12</a> 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 ( <a href="#">sheaves F16H 55/00</a> )
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>
<a href="#">B66D 5/02</a>	. Crane, lift hoist, or winch brakes operating on drums, barrels, or ropes
<a href="#">B66D 5/023</a>	.. {Cooling of brakes (in general <a href="#">F16D</a> )}
<a href="#">B66D 5/026</a>	.. {Fluid-resistance brakes}
<a href="#">B66D 5/04</a>	.. actuated by centrifugal force
<a href="#">B66D 5/06</a>	.. with radial effect ( <a href="#">B66D 5/20</a> takes precedence)
<a href="#">B66D 5/08</a>	... embodying blocks or shoes
<a href="#">B66D 5/10</a>	... embodying bands
<a href="#">B66D 5/12</a>	.. with axial effect ( <a href="#">B66D 5/22</a> takes precedence)
<a href="#">B66D 5/14</a>	... embodying discs
<a href="#">B66D 5/16</a>	.. for action on ropes or cables
<a href="#">B66D 5/18</a>	.. for generating braking forces which are proportional to the loads suspended; Load-actuated brakes
<a href="#">B66D 5/20</a>	... with radial effect
<a href="#">B66D 5/22</a>	... with axial effect
<a href="#">B66D 5/24</a>	.. Operating devices
<a href="#">B66D 5/26</a>	... pneumatic or hydraulic
<a href="#">B66D 5/28</a>	.... specially adapted for winding gear, e.g. in mining hoists
<a href="#">B66D 5/30</a>	... electrical
<a href="#">B66D 5/32</a>	. Detent devices
<a href="#">B66D 5/34</a>	.. having latches
<b>B66D 2700/00</b>	<b>Capstans, winches or hoists</b>
<a href="#">B66D 2700/01</a>	. Winches, capstans or pivots
<a href="#">B66D 2700/0108</a>	.. with devices for paying out or automatically tightening the cable
<a href="#">B66D 2700/0116</a>	.. Manually or spring operated winches
<a href="#">B66D 2700/0125</a>	.. Motor operated winches
<a href="#">B66D 2700/0133</a>	... Fluid actuated
<a href="#">B66D 2700/0141</a>	... Electrically actuated
<a href="#">B66D 2700/015</a>	... Actuated by chain, belt or by friction
<a href="#">B66D 2700/0158</a>	... Hydraulically controlled couplings or gearings
<a href="#">B66D 2700/0166</a>	... Winches with multiple drums or with drums with multiple parts of different diameter
<a href="#">B66D 2700/0175</a>	.... with adjacent drums mounted on a single shaft with a common coupling member
<a href="#">B66D 2700/0183</a>	.. Details, e.g. winch drums, cooling, bearings, mounting, base structures, cable guiding or attachment of the cable to the drum
<a href="#">B66D 2700/0191</a>	... Cable guiding during winding or paying out
<a href="#">B66D 2700/02</a>	. Hoists or accessories for hoists
<a href="#">B66D 2700/021</a>	.. 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