

**CPC****COOPERATIVE PATENT CLASSIFICATION****B66F****HOISTING, LIFTING, HAULING OR PUSHING, NOT OTHERWISE PROVIDED FOR, e.g. DEVICES WHICH APPLY A LIFTING OR PUSHING FORCE DIRECTLY TO THE SURFACE OF A LOAD**

{ invalid lifting devices [A61G 7/10](#) ; } mounting artificial islands on piles or like supports [E02B 17/00](#) ; scaffolding combined with lifting devices [E04G 1/22](#) ; lifting devices for sliding forms [E04G 11/24](#) ; lifting of buildings [E04G 23/06](#) ; shores or struts [E04G 25/00](#) ; lifts or other hoisting devices on ladders [E06C 7/12](#) ; props for mining [E21D 15/00](#) )

**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:

[B66F 19/02](#) covered by [B66F 19/00](#)

**B66F 1/00****Devices, e.g. jacks, for lifting loads in predetermined steps**

B66F 1/02

. with locking elements, e.g. washers, co-operating with posts

B66F 1/025

.. {the devices being operated by fluid pressure( [B66F 1/08](#) takes precedence )}

B66F 1/04

.. the posts being toothed

B66F 1/06

... and the devices being actuated mechanically

B66F 1/08

... and the devices being operated by fluid pressure

**B66F 3/00****Devices, e.g. jacks, adapted for uninterrupted lifting of loads( mobile jacks of the garage type [B66F 5/00](#) )**

B66F 3/005

. {with rocking arm or sector}

B66F 3/02

. with racks actuated by pinions

B66F 3/04

.. with several racks

B66F 3/06

.. with racks comprising pivotable toothed sections or segments, e.g. arranged in pairs

B66F 3/08

. screw operated( [B66F 3/44](#) takes precedence; [gearings F16H](#) )

B66F 3/10

.. with telescopic sleeves

B66F 3/12

.. comprising toggle levers( lazy-tongs mechanisms [B66F 3/22](#) )

B66F 3/14

.. actuated through pawl-and-ratchet mechanisms

B66F 3/16

.. actuated through bevel-wheel gearings

B66F 3/18

.. actuated through worm gearings

B66F 3/20

.. actuated through multiple or change-speed gearings

B66F 3/22

. Lazy-tongs mechanisms{( [B66F 11/042](#) takes precedence )}

B66F 3/24

. fluid-pressure operated( water-pressure machines [F03B](#) ; hydraulic gearings [F16H](#) ; cylinders, pistons [F16J](#) ; fluid-pressure servomotors [F15B](#) )

B66F 3/242

.. {suspended jacks}

- B66F 3/245 .. {comprising toggle levers( lazy-tongs mechanisms [B66F 3/22](#) )}
- B66F 3/247 .. {pneumatically actuated( [B66F 3/35](#) takes precedence )}
- B66F 3/25 .. Constructional features
- B66F 3/26 ... Adaptations or arrangements of pistons
- B66F 3/28 .... telescopic
- B66F 3/30 ... with positive brakes or lock
- B66F 3/32 ... with means for avoiding excessive shocks on completion of movements
- B66F 3/35 ... Inflatable flexible elements, e.g. bellows( [inflatable load-engaging elements B66F 3/40](#) ; [connection of valves to inflatable elastic bodies B60C 29/00](#) )
- B66F 3/36 ... Load-engaging elements
- B66F 3/38 .... adjustable relative to piston
- B66F 3/40 .... inflatable( [connection of valves to inflatable elastic bodies B60C 29/00](#) )
- B66F 3/42 ... with self-contained pumps, e.g. actuated by hand
- B66F 3/43 .. Pyrotechnical jacks
- B66F 3/44 . with self-contained electric driving motors
- B66F 3/46 . Combinations of several jacks with means for interrelating lifting or lowering movements

#### **B66F 5/00 Mobile jacks of the garage type mounted on wheels or rollers**

- B66F 5/02 . with mechanical lifting gear
- B66F 5/025 .. {screw-actuated}
- B66F 5/04 . with fluid-pressure-operated lifting gear

#### **B66F 7/00 Lifting frames, e.g. for lifting vehicles; Platform lifts({ [B66F 11/04](#) takes precedence } ; for lift-truck platform [B66F 9/06](#) )**

- B66F 7/02 . with platforms suspended from ropes, cables, or chains{or screws and movable along pillars}
- B66F 7/025 .. {screw operated}
- B66F 7/04 .. hydraulically or pneumatically operated
- B66F 7/06 . with platforms supported by levers for vertical movement
- B66F 7/0608 .. {driven by screw or spindle}
- B66F 7/0616 .. {Suspended platforms, i.e. the load platform hangs from the base}
- B66F 7/0625 .. {with wheels for moving around the floor}
- B66F 7/0633 .. {Mechanical arrangements not covered by the following subgroups}
- B66F 7/0641 .. {Single levers, e.g. parallel links}
- B66F 7/065 .. {Scissor linkages, i.e. X-configuration}
- B66F 7/0658 ... {Multiple scissor linkages horizontally arranged}
- B66F 7/0666 ... {Multiple scissor linkages vertically arranged}
- B66F 7/0675 .... {Auxiliary scissors, e.g. above main scissors}
- B66F 7/0683 ... {Scissor linkage plus tilting action}
- B66F 7/0691 .. {Asymmetric linkages, i.e. Y-configuration}
- B66F 7/08 .. hydraulically or pneumatically operated

|                  |  |
|------------------|--|
| B66F 7/085       | ... {pneumatically operated}   |
| B66F 7/10        | . with platforms supported directly by jacks   |
| B66F 7/12        | .. by mechanical jacks   |
| B66F 7/14        | ... screw operated   |
| B66F 7/16        | .. by one or more hydraulic or pneumatic jacks   |
| B66F 7/18        | ... by a single central jack   |
| B66F 7/20        | ... by several jacks with means for maintaining the platforms horizontal during movement   |
| B66F 7/22        | . with tiltable platforms( <a href="#">tilting vehicles for unloading B65G 67/34</a> )   |
| B66F 7/24        | . for raising or lowering vehicles by their own power  |
| B66F 7/243       | .. {Ramps}   |
| B66F 7/246       | .. {Wheel supporting trolleys}   |
| B66F 7/26        | . for selective lifting of parts of vehicles( <a href="#">mobile garage jacks B66F 5/00</a> )  |
| B66F 7/28        | . Constructional details, e.g. end stops, pivoting supporting members, sliding runners adjustable to load dimensions   |
| <b>B66F 9/00</b> | <b>Devices for lifting or lowering bulky or heavy goods for loading or unloading purposes</b> ( <a href="#">mobile or transportable lifts in, or associated with, buildings and specially adapted to be shifted from one part of a building or other structure to another part or to another building or structure B66B 9/16</a> ; <a href="#">cranes B66C</a> ) |
| B66F 9/02        | . Stationary loaders or unloaders, e.g. for sacks  |
| B66F 9/04        | .. hydraulically actuated or controlled  |
| B66F 9/06        | . movable, with their loads, on wheels or the like, e.g. fork-lift trucks( <a href="#">vehicle aspects B60 to B62</a> ; <a href="#">vehicles predominantly for transporting loads and modified to facilitate loading or unloading B60P 1/00</a> ; <a href="#">low-lift hand trucks for transporting goods B62B 3/06</a> )  |
| B66F 9/061       | .. {characterised by having a lifting jib}   |
| B66F 9/063       | .. {Automatically guided}  |
| B66F 9/065       | .. non-masted( <a href="#">mobile jacks of the garage type mounted on wheels or rollers B66F 5/00</a> )  |
| B66F 9/0655      | ... {with a telescopic boom}   |
| B66F 9/07        | .. Floor-to-roof stacking devices, e.g. "stacker cranes", "retrievers"   |
| B66F 9/072       | ... {Travelling gear therefor}   |
| B66F 9/075       | .. Constructional features or details  |
| B66F 9/07504     | ... {Accessories, e.g. for towing, charging, locking}  |
| B66F 9/07509     | ... {Braking}  |
| B66F 9/07513     | ... {Details concerning the chassis}   |
| B66F 9/07518     | .... {Fuel or oil tank arrangements}   |
| B66F 9/07522     | .... {Variable length or width chassis}  |
| B66F 9/07527     | .... {Covers for e.g. engines or batteries}  |
| B66F 9/07531     | .... {Battery compartments}  |
| B66F 9/07536     | ..... {Battery stoppers, i.e. means to hold battery in position}   |
| B66F 9/0754      | .... {Battery removal arrangements}  |

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|--------------|-------|---|
| B66F 9/07545 | ...   | {Overhead guards}   |
| B66F 9/0755  | ...   | {Position control; Position detectors}  |
| B66F 9/07554 | ...   | {Counterweights}  |
| B66F 9/07559 | ...   | {Stabilizing means}   |
| B66F 9/07563 | ...   | {Fork-lift trucks adapted to be carried by transport vehicles}  |
| B66F 9/07568 | ...   | {Steering arrangements}   |
| B66F 9/07572 | ...   | {Propulsion arrangements}   |
| B66F 9/07577 | ....  | {not supported by wheels, e.g. tracks or air cushions}  |
| B66F 9/07581 | ...   | {Remote controls}   |
| B66F 9/07586 | ...   | {Suspension or mounting of wheels on chassis}   |
| B66F 9/0759  | ...   | {Details of operating station, e.g. seats, levers, operator platforms, cabin suspension}              |
| B66F 9/07595 | ...   | {Cooling arrangements for device or operator}   |
| B66F 9/08    | ...   | Masts; Guides; Chains   |
| B66F 9/082   | ....  | {inclinalable}  |
| B66F 9/085   | ....  | {Multiple forks, i.e. more than one pair mounted on a single mast or with more than one mast}         |
| B66F 9/087   | ....  | {Monomasts}   |
| B66F 9/10    | ....  | movable in a horizontal direction relative to truck   |
| B66F 9/105   | ..... | {Articulated, i.e. front chassis with wheels and mast rotatable relative to rear chassis with wheels} |
| B66F 9/12    | ...   | Platforms; Forks; Other load supporting or gripping members   |
| B66F 9/122   | ....  | {longitudinally movable}  |
| B66F 9/125   | ....  | {rotatable about a longitudinal axis}   |
| B66F 9/127   | ....  | {Working platforms}   |
| B66F 9/14    | ....  | laterally movable, e.g. swingable, for slewing or transverse movements                                |
| B66F 9/141   | ..... | {with shuttle-type movement}  |
| B66F 9/142   | ..... | {Movements of forks either individually or relative to each other}                                    |
| B66F 9/143   | ..... | {Movements of forks relative to each other - symmetric}   |
| B66F 9/144   | ..... | {Movements of forks relative to each other - independent}   |
| B66F 9/145   | ..... | {Rotation of fork around vertical axis}   |
| B66F 9/146   | ..... | {Side shift, i.e. both forks move together sideways relative to fork support}                         |
| B66F 9/147   | ..... | {Whole unit including fork support moves relative to mast}  |
| B66F 9/148   | ..... | {Whole unit including fork support moves sideways}  |
| B66F 9/149   | ..... | {Whole unit including fork support rotates}   |
| B66F 9/16    | ....  | inclinalable relative to mast   |
| B66F 9/165   | ..... | {Foldable forks, i.e. where only the horizontal section moves}  |
| B66F 9/18    | ....  | Load gripping or retaining means  |
| B66F 9/181   | ..... | {by suction means}  |
| B66F 9/182   | ..... | {by magnetic means}   |
| B66F 9/183   | ..... | {Coplanar side clamps}  |

|                     |       |  |
|---------------------|-------|--|
| B66F 9/184          | ..... | {Roll clamps}  |
| B66F 9/185          | ..... | {by internally expanding grippers}   |
| B66F 9/186          | ..... | {Container lifting frames}   |
| B66F 9/187          | ..... | {Drum lifting devices}   |
| B66F 9/188          | ..... | {Stacked-bricks lifting devices}   |
| B66F 9/19           | ....  | Additional means for facilitating unloading  |
| B66F 9/195          | ..... | {for pushing the load}   |
| B66F 9/20           | ...   | Means for actuating or controlling masts, platforms, or forks( <a href="#">power take-off from vehicle transmissions</a> , combined with vehicle propulsion systems <a href="#">B60K</a> )   |
| B66F 9/205          | ....  | {Arrangements for transmitting pneumatic, hydraulic or electric power to movable parts or devices( <a href="#">for cranes B66C 13/12</a> )}  |
| B66F 9/22           | ....  | Hydraulic devices or systems   |
| B66F 9/24           | ....  | Electrical devices or systems  |
| <b>B66F 11/00</b>   |       | <b>Lifting devices specially adapted for particular uses not otherwise provided for</b> ( <a href="#">ground-engaging vehicle fittings for supporting, lifting or manoeuvring the vehicle B60S 9/00</a> )  |
| B66F 11/04          | .     | for movable platforms or cabins, e.g. on vehicles, permitting workmen to place themselves in any desired position for carrying out required operations({ <a href="#">Working platforms on fork-lift trucks B66F 9/127</a> ; } <a href="#">vehicle aspects of service vehicles B60P 3/14</a> ; <a href="#">platforms for cleaning windows A47L 3/02</a> ; <a href="#">devices for rescuing persons from buildings A62B 1/02</a> ; <a href="#">liftable or lowerable platforms for use on ladders E06C 7/16</a> ; <a href="#">maintenance travellers for bridges E01D 19/10</a> ; <a href="#">scaffolds on an extensible sub-structure E04G 1/22</a> ) |
| B66F 11/042         | ..    | {actuated by lazy-tongs mechanisms or articulated levers}  |
| B66F 11/044         | ..    | {Working platforms suspended from booms}   |
| B66F 11/046         | ...   | {of the telescoping type}  |
| B66F 11/048         | ..    | {Mobile camera platform}   |
| <b>B66F 13/00</b>   |       | <b>Common constructional features or accessories</b>   |
| B66F 13/005         | .     | {Thrust chain devices}   |
| <b>B66F 15/00</b>   |       | <b>Crowbars or levers</b>  |
| <b>B66F 17/00</b>   |       | <b>Safety devices, e.g. for limiting or indicating lifting force</b>   |
| B66F 17/003         | .     | {for fork-lift trucks}   |
| B66F 17/006         | .     | {for working platforms}  |
| <b>B66F 19/00</b>   |       | <b>Hoisting, lifting, hauling or pushing, not otherwise provided for</b>   |
| B66F 19/005         | .     | {Lifting devices for manhole covers}   |
| <b>B66F 2700/00</b> |       | <b>Lifting apparatus</b>   |
| B66F 2700/02        | .     | Lifting devices with a toothed post and pawl latch or with a post and locking elements   |
| B66F 2700/025       | ..    | with a post and locking elements   |
| B66F 2700/03        | .     | Lifting jacks with pinion and rack   |

- B66F 2700/04
  - . Jacks with screw and nut
- B66F 2700/05
  - . Hydraulic jacks
- B66F 2700/052
  - .. Support- or transmission members
- B66F 2700/055
  - .. Jacks with a single cylinder
- B66F 2700/057
  - ... Pistons, e.g. telescopic; Cylinders or sealing joints; Hydraulic travel-limiting devices or shock damping
- B66F 2700/07
  - . Lifting devices actuated by the driving force of water
- B66F 2700/09
  - . Other lifting devices
- B66F 2700/12
  - . Lifting platforms for vehicles or motorcycles or similar lifting apparatus
- B66F 2700/123
  - .. Details concerning the support members or devices not related to the lifting itself
- B66F 2700/126
  - .. Arrangements in which the platform is fixed to the upper end of a single or plural jacks