

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 (tilting vehicles for unloading [B65G 67/34](#))
- 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 (mobile garage jacks [B66F 5/00](#))
- B66F 7/28 . . Constructional details, e.g. end stops, pivoting supporting members, sliding runners adjustable to load dimensions

B66F 9/00

Devices for lifting or lowering bulky or heavy goods for loading or unloading purposes (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](#); cranes [B66C](#))

- 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 (vehicle aspects [B60](#) - [B62](#); vehicles predominantly for transporting loads and modified to facilitate loading or unloading [B60P 1/00](#); low-lift hand trucks for transporting goods [B62B 3/06](#))
- B66F 9/061 . . . {characterised by having a lifting jib}
- B66F 9/063 . . . {Automatically guided}
- B66F 9/065 . . . non-masted (mobile jacks of the garage type mounted on wheels or rollers [B66F 5/00](#))
- 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}
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	. . . . inclinable 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 (power take-off from vehicle transmissions, combined with vehicle propulsion systems B60K)
B66F 9/205	. . . . . {Arrangements for transmitting pneumatic, hydraulic or electric power to movable parts or devices (for cranes B66C 13/12)}
B66F 9/22	. . . . . Hydraulic devices or systems
B66F 9/24	. . . . . Electrical devices or systems
B66F 11/00	Lifting devices specially adapted for particular uses not otherwise provided for (ground-engaging vehicle fittings for supporting, lifting or manoeuvring the vehicle B60S 9/00)
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 ({Working platforms on fork-lift trucks B66F 9/127 ; } vehicle aspects of service vehicles B60P 3/14 ; platforms for cleaning windows A47L 3/02 ; devices for rescuing persons from buildings A62B 1/02 ; liftable or lowerable platforms for use on ladders E06C 7/16 ; maintenance travellers for bridges E01D 19/10 ; scaffolds on an extensible sub-structure E04G 1/22)
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}
B66F 13/00	Common constructional features or accessories
B66F 13/005	. {Thrust chain devices}
B66F 15/00	Crowbars or levers
B66F 17/00	Safety devices, e.g. for limiting or indicating lifting force
B66F 17/003	. {for fork-lift trucks}
B66F 17/006	. {for working platforms}
B66F 19/00	Hoisting, lifting, hauling or pushing, not otherwise provided for
B66F 19/005	. {Lifting devices for manhole covers}
B66F 2700/00	Lifting apparatus

- 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