

B66D

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

Definition statement

This subclass/group covers:

This subclass includes:

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

IPC group [B66D 1/395](#) is not used in the internal ECLA classification scheme. Subject matter covered by this group is classified in the following ECLA groups: [B66D 1/36](#), [B66D 1/50](#)

References relevant to classification in this subclass

This subclass/group does not cover:

Lifting arrangements for furniture	A47B
Devices for life saving	A62B
Winding or unwinding ropes or cables for feeding or storage purposes	B65H
Cable winding or unwinding mechanisms for lifts	B66B
Winding units specially adapted for drilling operations	E21B 19/008
Lifting arrangements for lamps	F21V

B66D 1/00

Rope, cable, or chain winding mechanisms; Capstans (portable or mobile lifting or hauling appliances B66D3/00)

Definition statement

This subclass/group covers:

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

Winches mounted on vehicles.

References relevant to classification in this group

This subclass/group does not cover:

Portable or mobile lifting or hauling appliances	B66D 3/00
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Special rules of classification within this group

Documents should be classified in the lowest subgroup possible and only classified in higher groups if none of the subgroups is applicable. If necessary documents should be classified in multiple subgroups. All non-trivial technical features should be classified. Main groups should only be used when no appropriate subgroup exists.

B66D 1/005

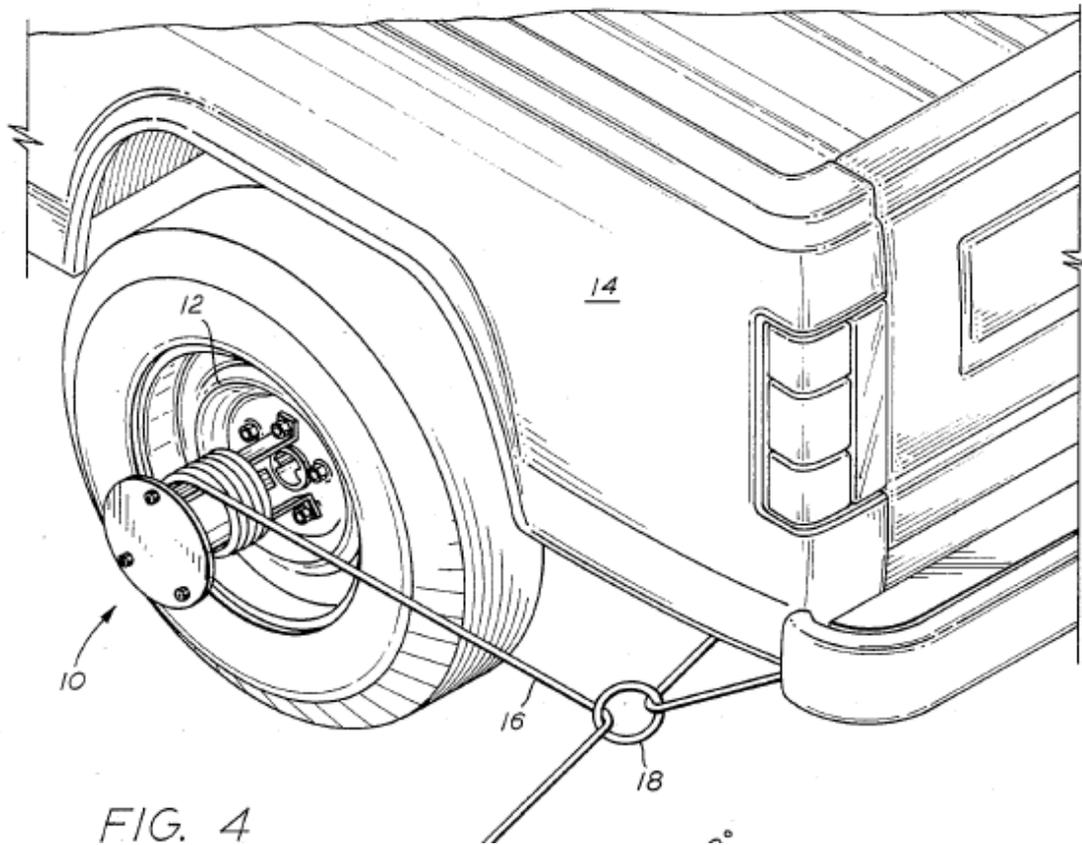
[N: Attaching winches to vehicle wheels]

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 1/005](#)

US 4 742 971



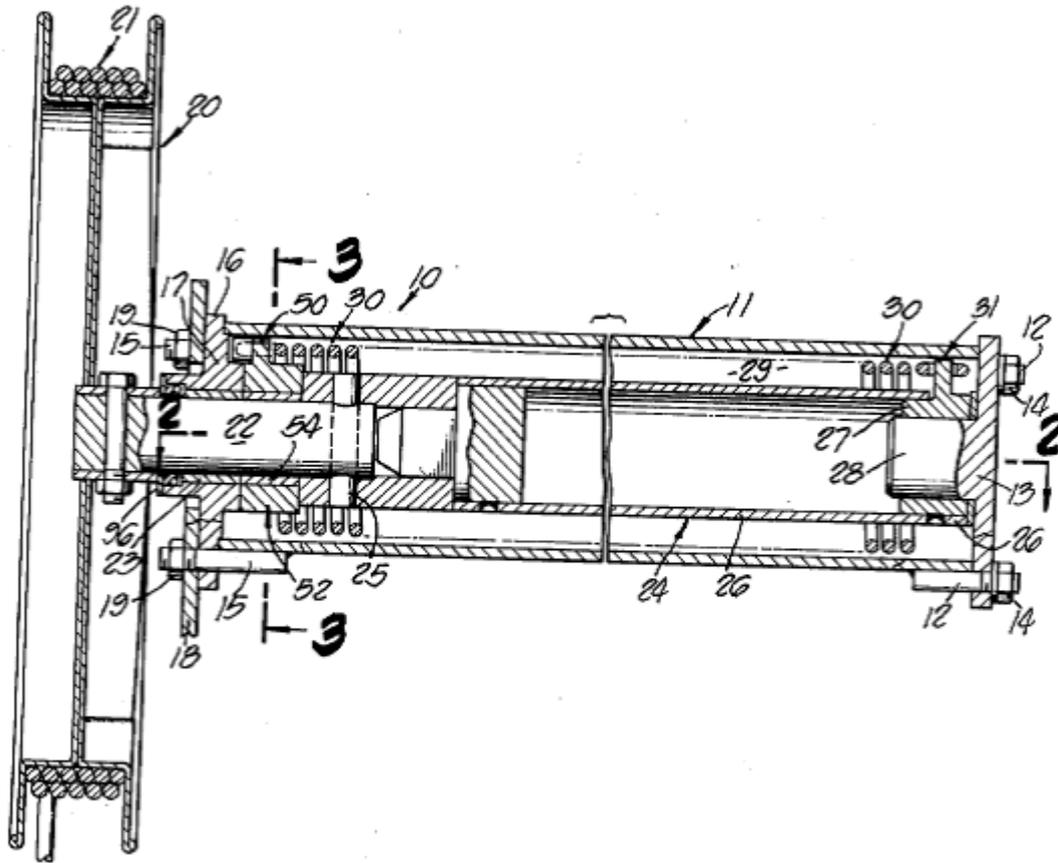
B66D 1/02

Driving gear

Definition statement

This subclass/group covers:

Drives using for example springs, see for example US 4 009 843



B66D 1/04

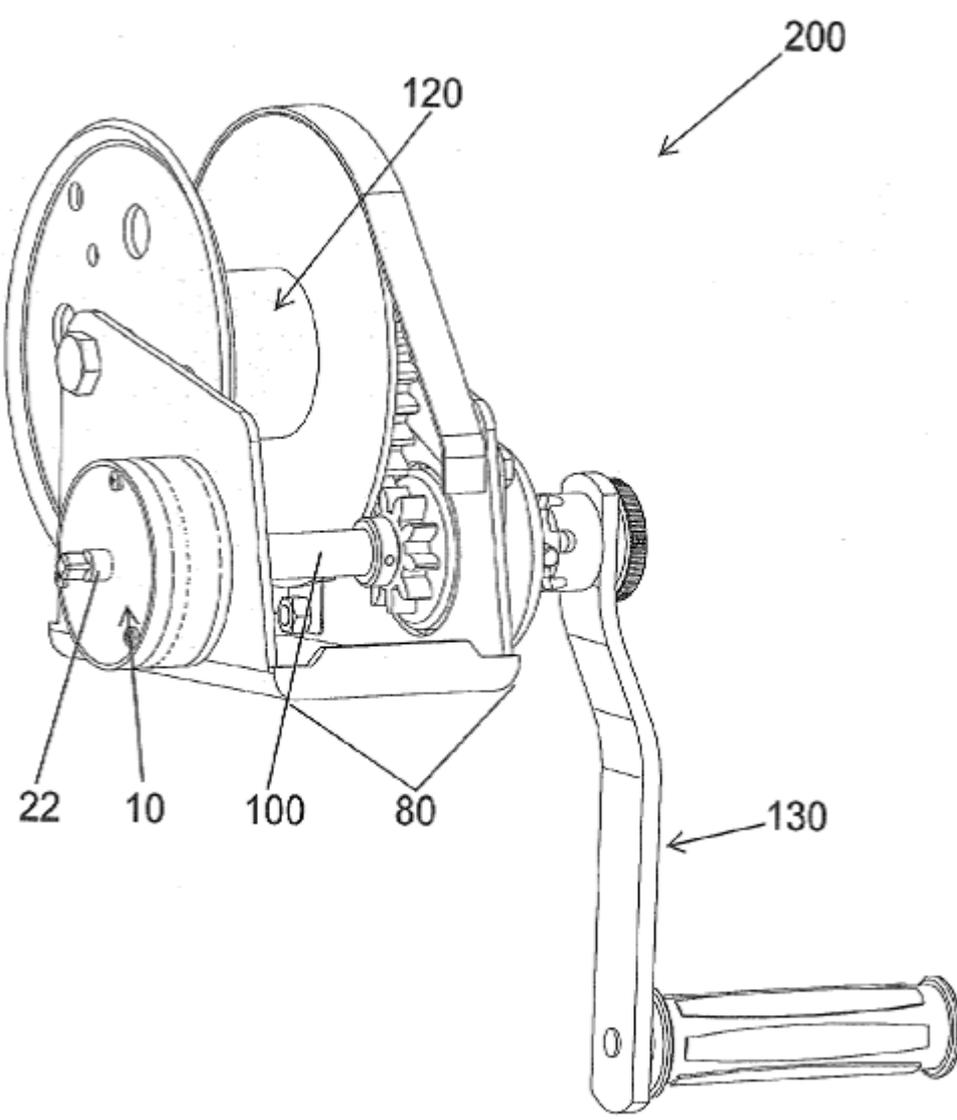
manually operated

Definition statement

This subclass/group covers:

Includes winches which can be driven both manually and powered (also classified in relevant subgroup of [B66D 1/08](#) and [B66D 1/12](#))

see for example US 2010/0133372



References relevant to classification in this group

This subclass/group does not cover:

Drives for capstan winches	B66D 1/74
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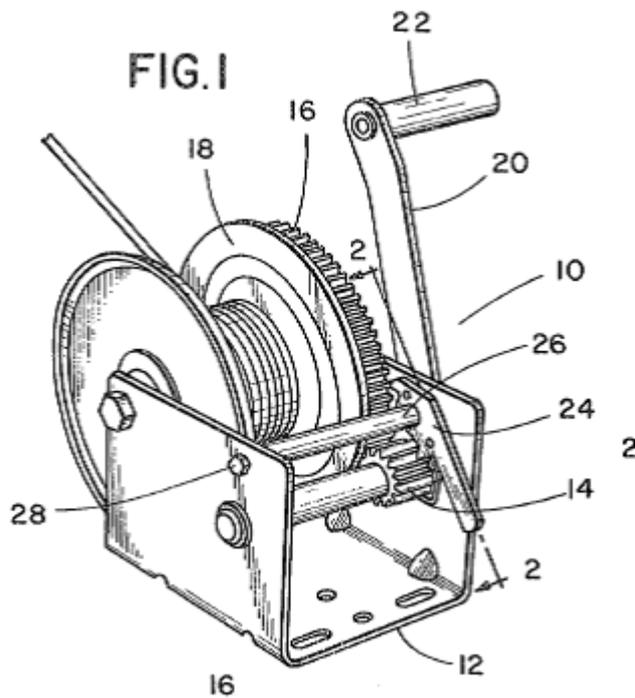
B66D 1/06

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

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 1/06](#)



Safety devices for motor driven winches	B66D 5/32 , B66D 5/34
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B66D 1/08

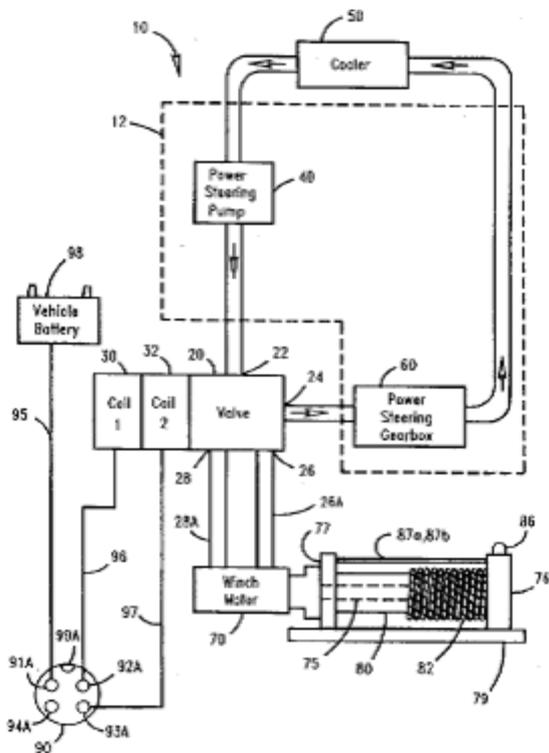
incorporating fluid motors

Definition statement

This subclass/group covers:

Driven by either pneumatic or hydraulic motors

see for example US 5 692 735



B66D 1/12

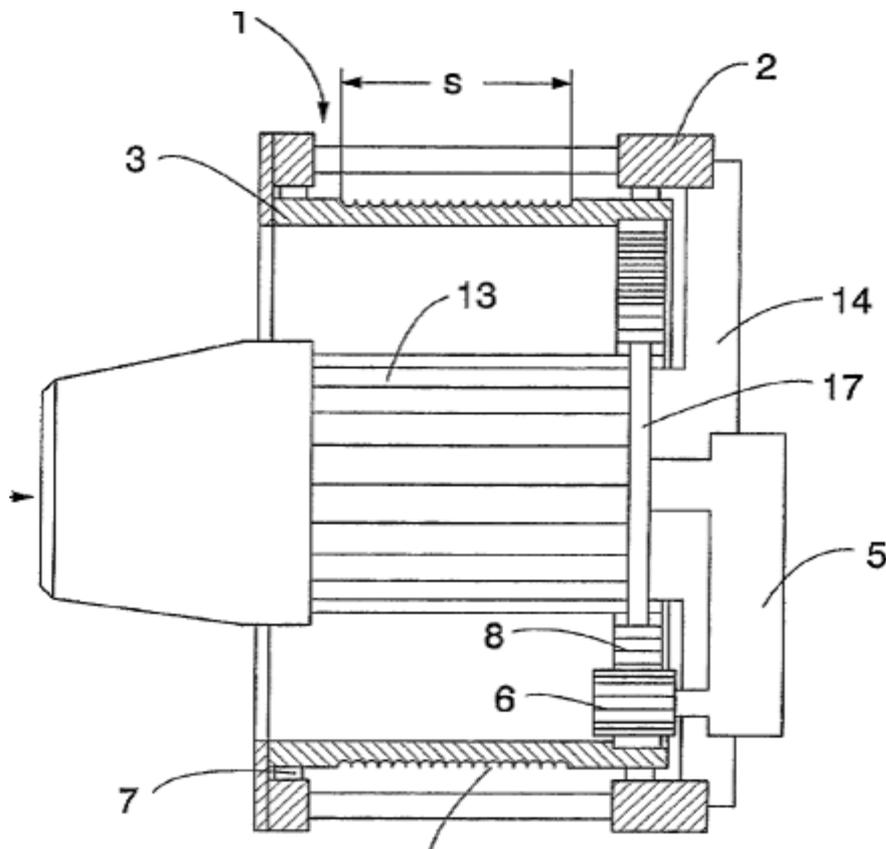
incorporating electric motors

Definition statement

This subclass/group covers:

Winches with particular motor types or motor drive arrangements

see for example US 2003/0001147



B66D 1/14

Power transmissions between power sources and drums or barrels [N: including brakes, one-way brakes, one-way clutches, clutches activated alternately with brakes, fixed ratio gearing unless otherwise provided for in B66D1/16 to B66D1/24]

Definition statement

This subclass/group covers:

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

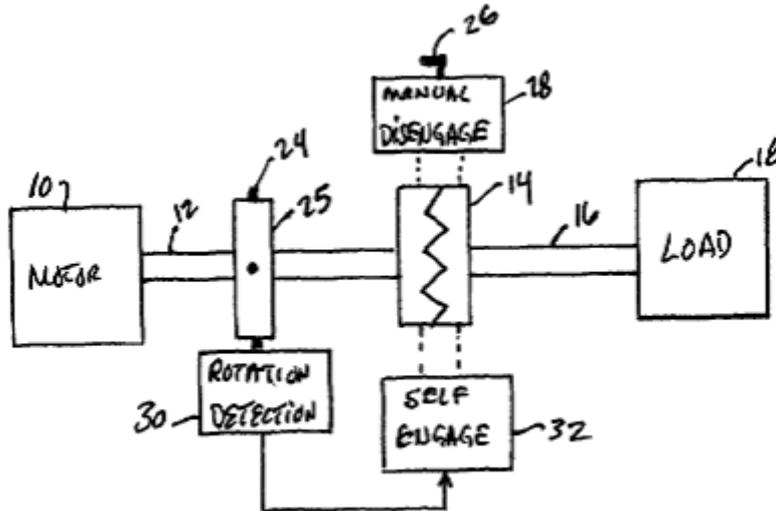
the drums or barrels being freely rotatable [N: e.g. having a clutch activated independently of a brake (B66D1/20, B66D1/22, B66D1/24 take precedence; clutches activated alternately with brakes B66D1/14, slip couplings B66D1/14)]

Definition statement

This subclass/group covers:

E.g. having a clutch activated independently of a brake ([B66D 1/20](#), [B66D 1/22](#), [B66D 1/24](#) take precedence)

see for example US 7 891 641



References relevant to classification in this group

This subclass/group does not cover:

Clutches activated alternately with brakes or slip couplings	B66D 1/14
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B66D 1/18

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

Definition statement

This subclass/group covers:

An engine e.g. an internal combustion engine on a motor vehicle or a portable winch

B66D 1/22

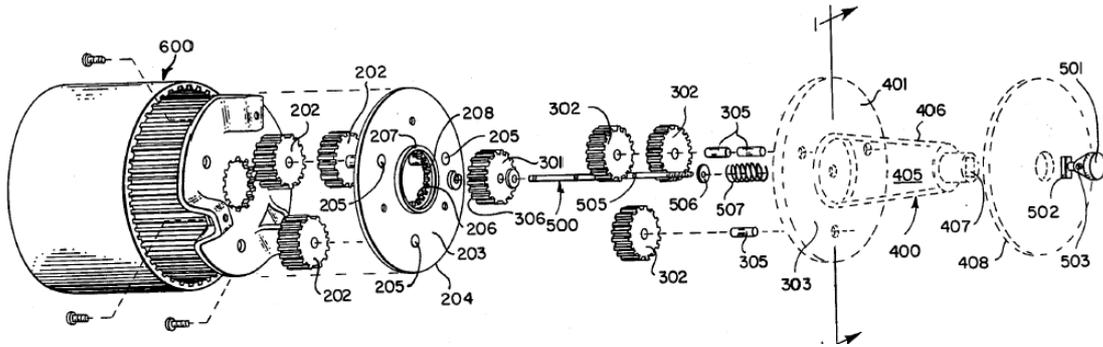
Planetary or differential gearings (for actuating grab buckets [B66D1/70](#)) [N: i.e. with planet gears having movable axes of rotation]

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 1/22](#)

US 4 452 429



References relevant to classification in this group

This subclass/group does not cover:

Devices for actuating grab buckets	B66D 1/70
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B66D 1/225

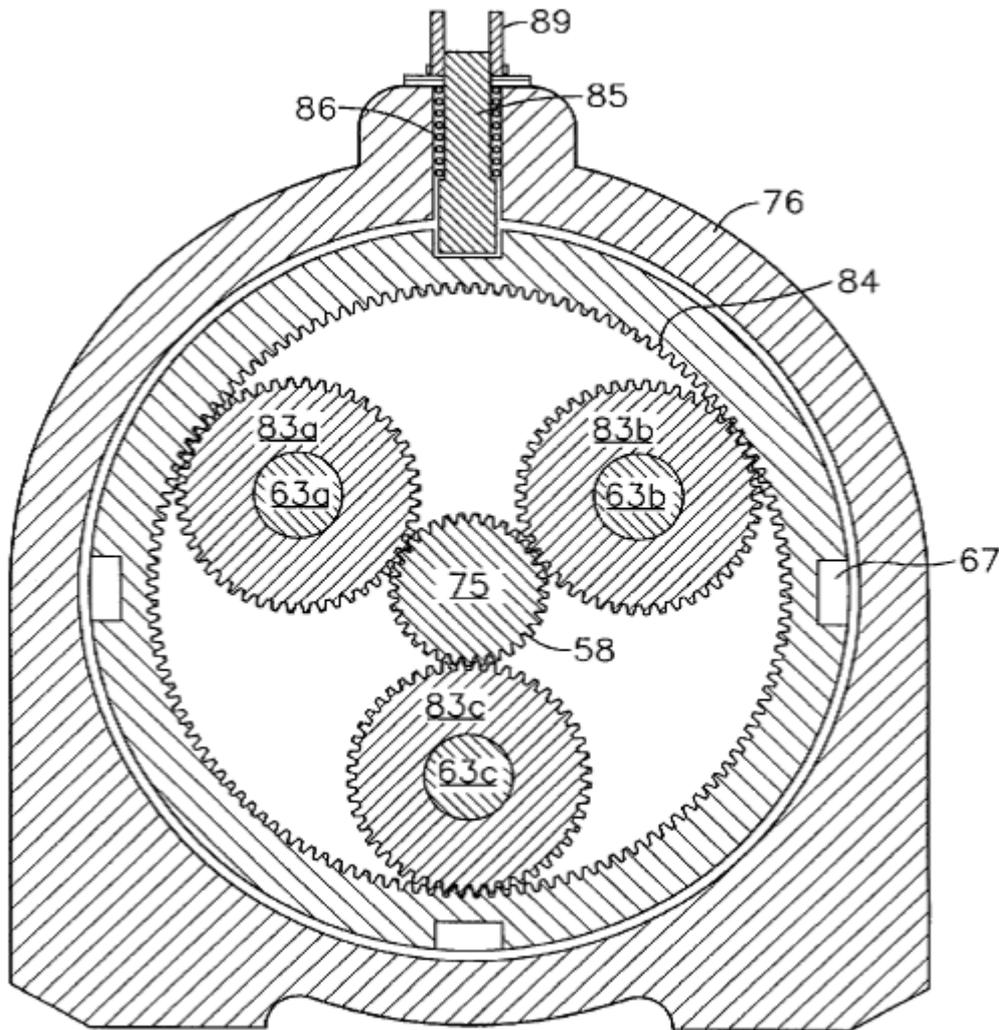
[N: variable ratio or reversing gearing (fixed ratio gearing B66D1/22)]

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 1/225](#)

US 5 842 684



References relevant to classification in this group

This subclass/group does not cover:

Fixed ratio gearing	B66D 1/22
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B66D 1/24

for varying speed or reversing direction of rotation of drums or barrels [N: i.e. variable ratio or reversing gearing (B66D1/225 takes precedence)]

References relevant to classification in this group

This subclass/group does not cover:

Variable ratio planetary gearings	B66D 1/225
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B66D 1/26

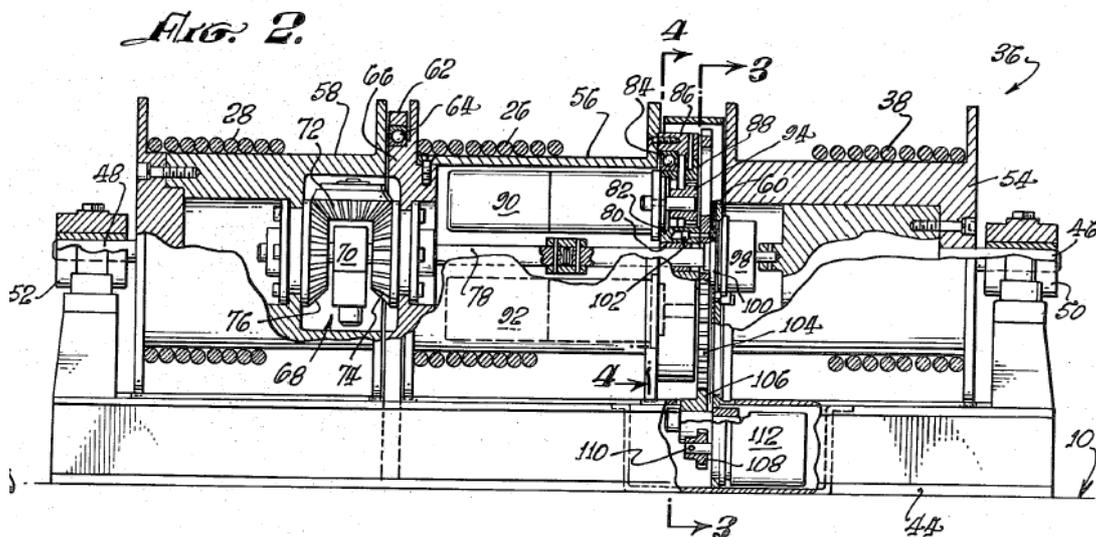
having several drums or barrels

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 1/26](#)

US 3 787 031



B66D 1/28

Other constructional details

Definition statement

This subclass/group covers:

Including e.g. frame and bearing arrangements;

Subgroups [B66D 1/30](#) to [B66D 1/525](#) take precedence

B66D 1/30

Rope, cable, or chain drums or barrels

Definition statement

This subclass/group covers:

Including drum construction; cooling;

References relevant to classification in this group

This subclass/group does not cover:

Capstans	B66D 1/74
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B66D 1/34

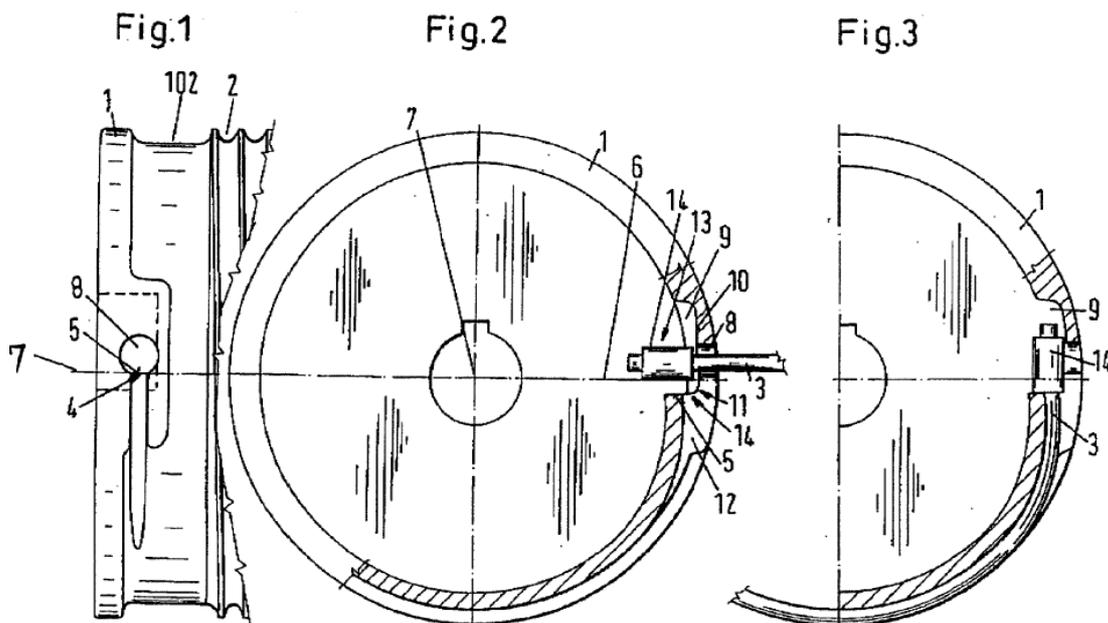
Attachment of ropes or cables to drums or barrels

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 1/34](#)

US 2002/0104918



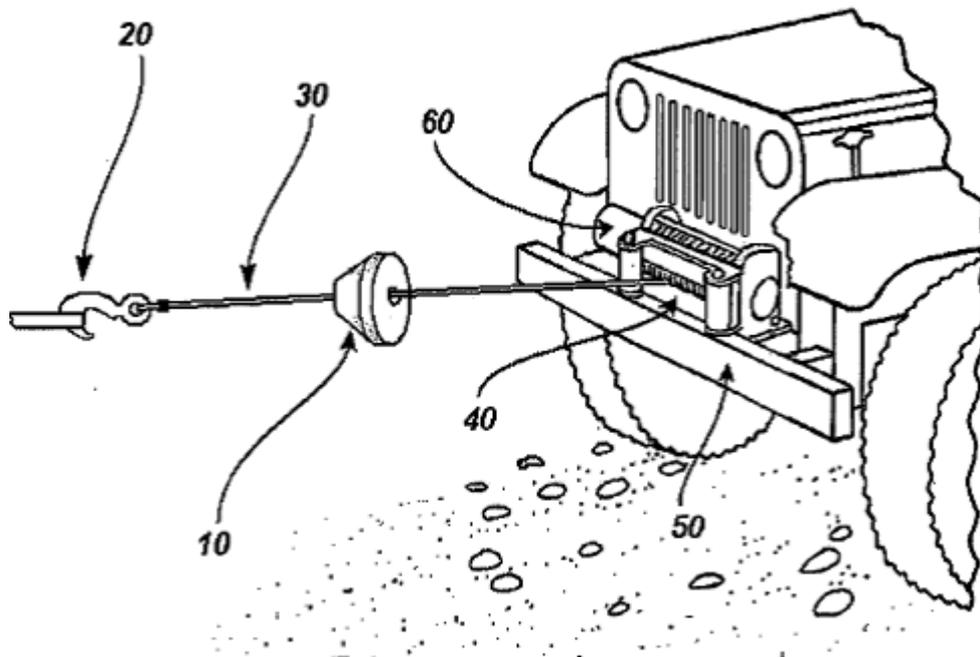
B66D 1/36

Guiding, or otherwise ensuring winding in an orderly manner, of ropes, cables, or chains

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 1/36](#)



B66D 1/365

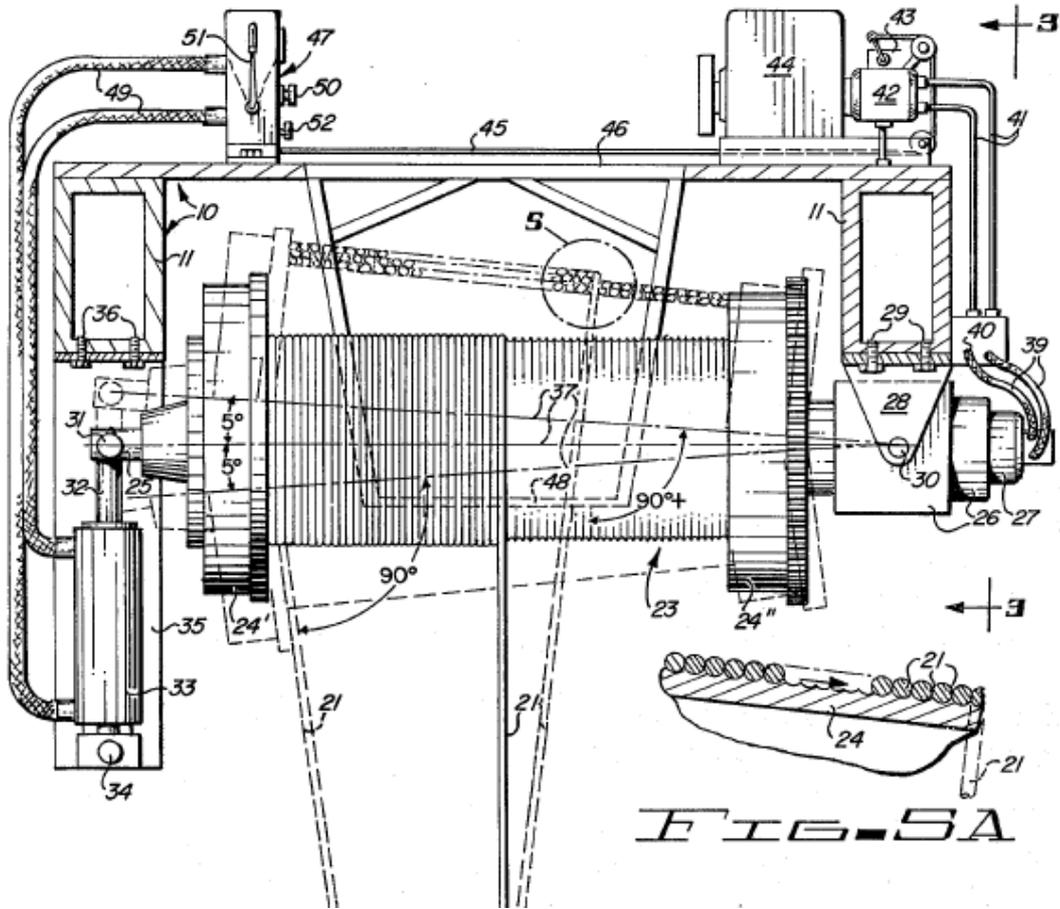
[N: by means of pivotably mounted drums or barrels]

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 1/365](#)

US 4 002 321



B66D 1/38

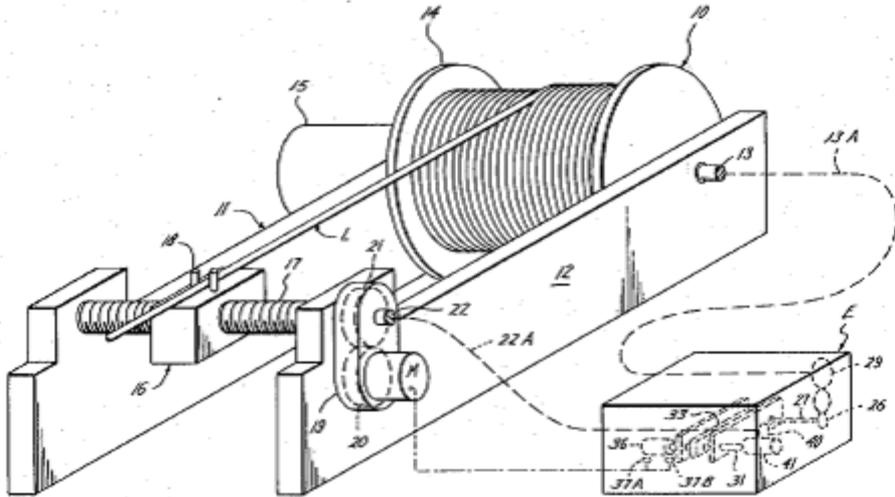
by means of guides movable relative to drum or barrel

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 1/38](#)

US 4 235 394



B66D 1/39

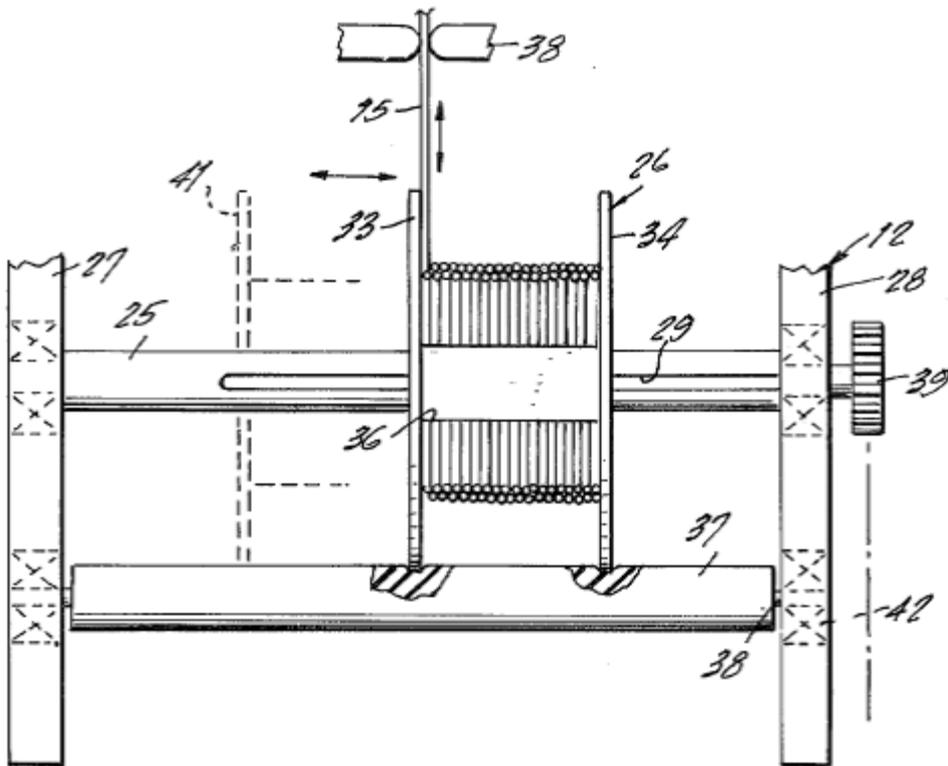
by means of axially-movable drums or barrels [N: (pivotably mounted drums or barrel B66D1/365)]

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 1/39](#)

US 4 087 060



References relevant to classification in this group

This subclass/group does not cover:

Pivotably mounted drums or barrels	B66D 1/365
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B66D 1/42

non-automatic

Definition statement

This subclass/group covers:

Control devices which do not respond to external conditions

References relevant to classification in this group

This subclass/group does not cover:

Remote controls for crane winches	B66C 13/40
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B66D 1/44

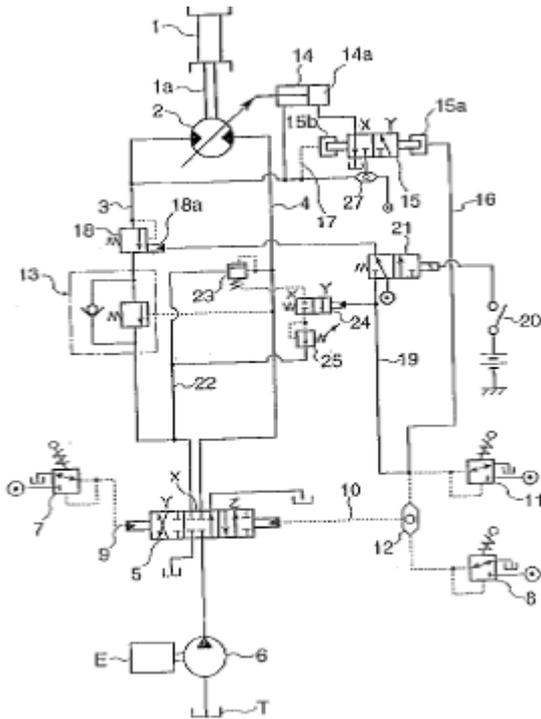
pneumatic or hydraulic

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 1/42](#)

US 6 371 447



B66D 1/46

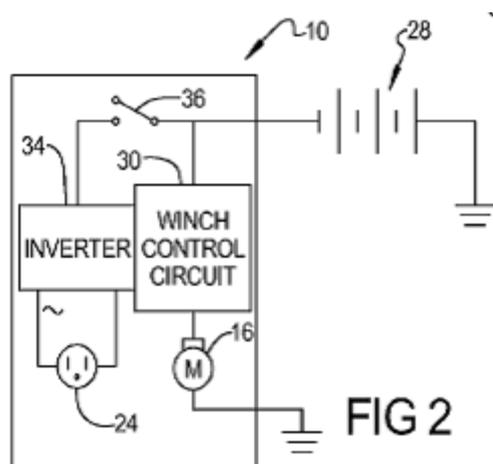
electric

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 1/46](#)

US 2008/0099738



B66D 1/48

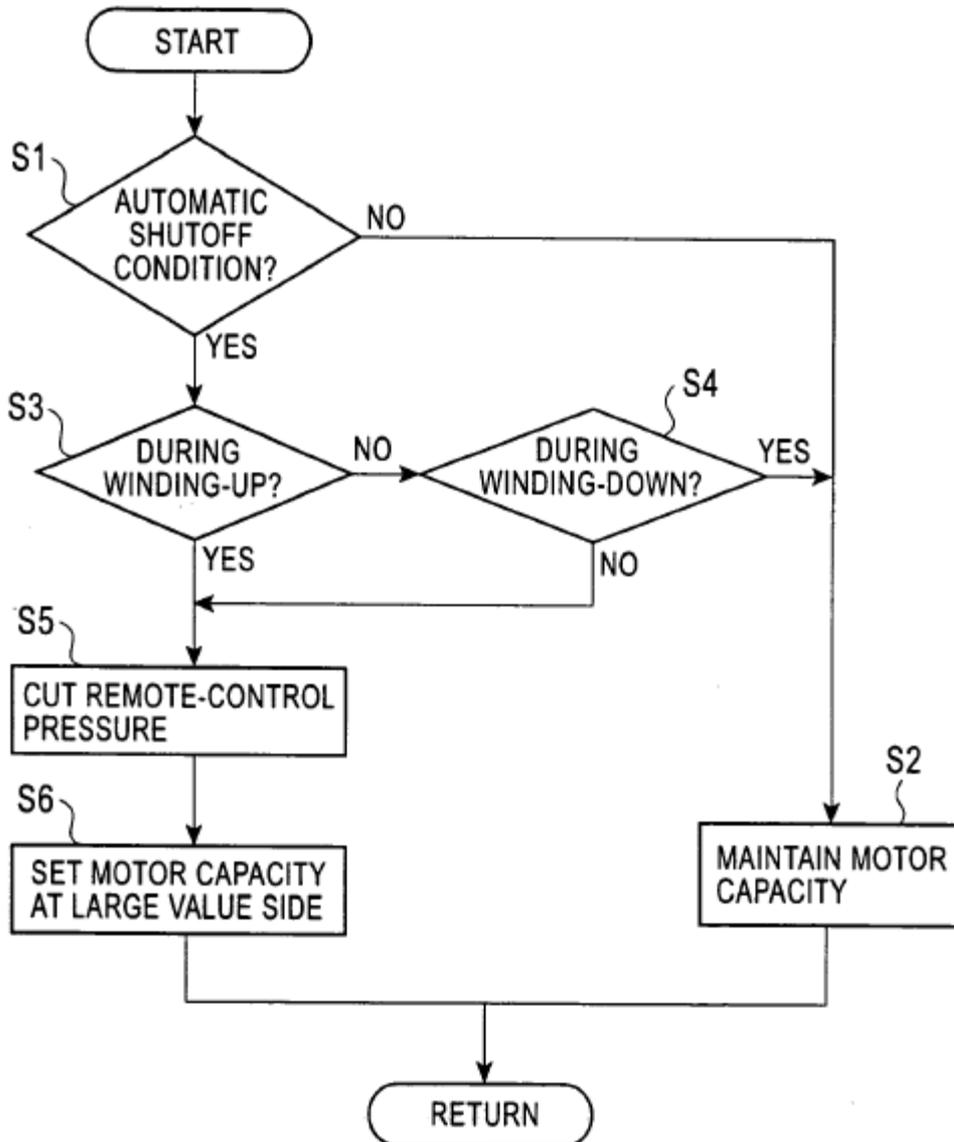
automatic

Definition statement

This subclass/group covers:

includes pneumatic and hydraulic control arrangements

US 2005/0143219



B66D 1/485

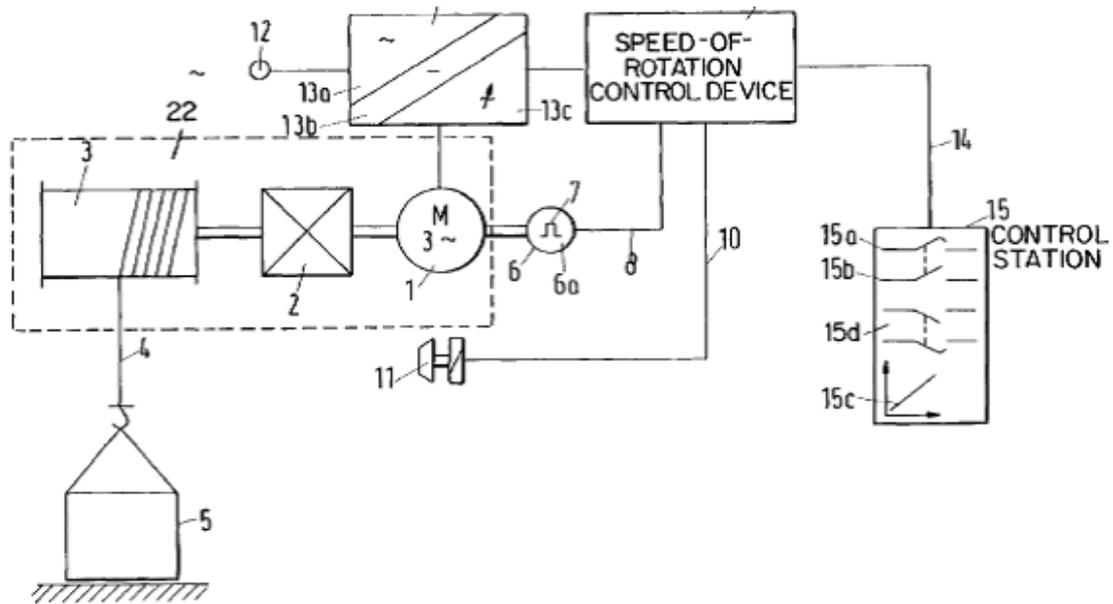
[N: electrical]

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 1/485](#)

US 5 818 185



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

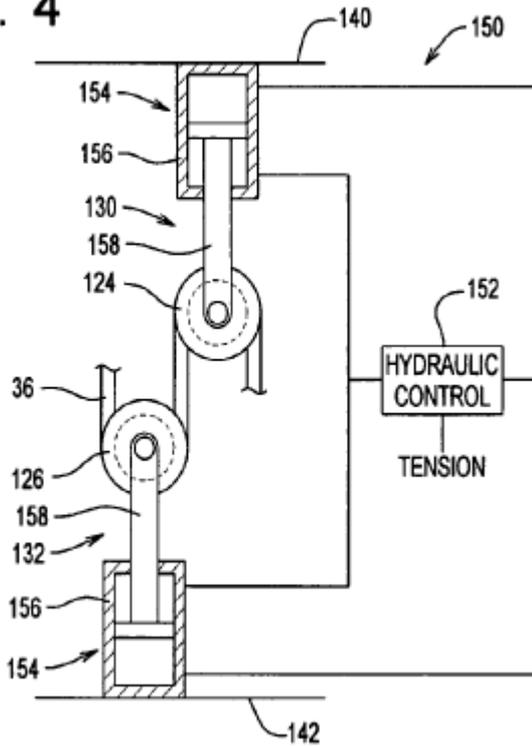
Definition statement

This subclass/group covers:

Ensures cable tension does not rise above or fall below desired value.

see for example US 7 389 973

FIG. 4



References relevant to classification in this group

This subclass/group does not cover:

Slack prevention controls for cranes	B66C 13/10
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B66D 1/505

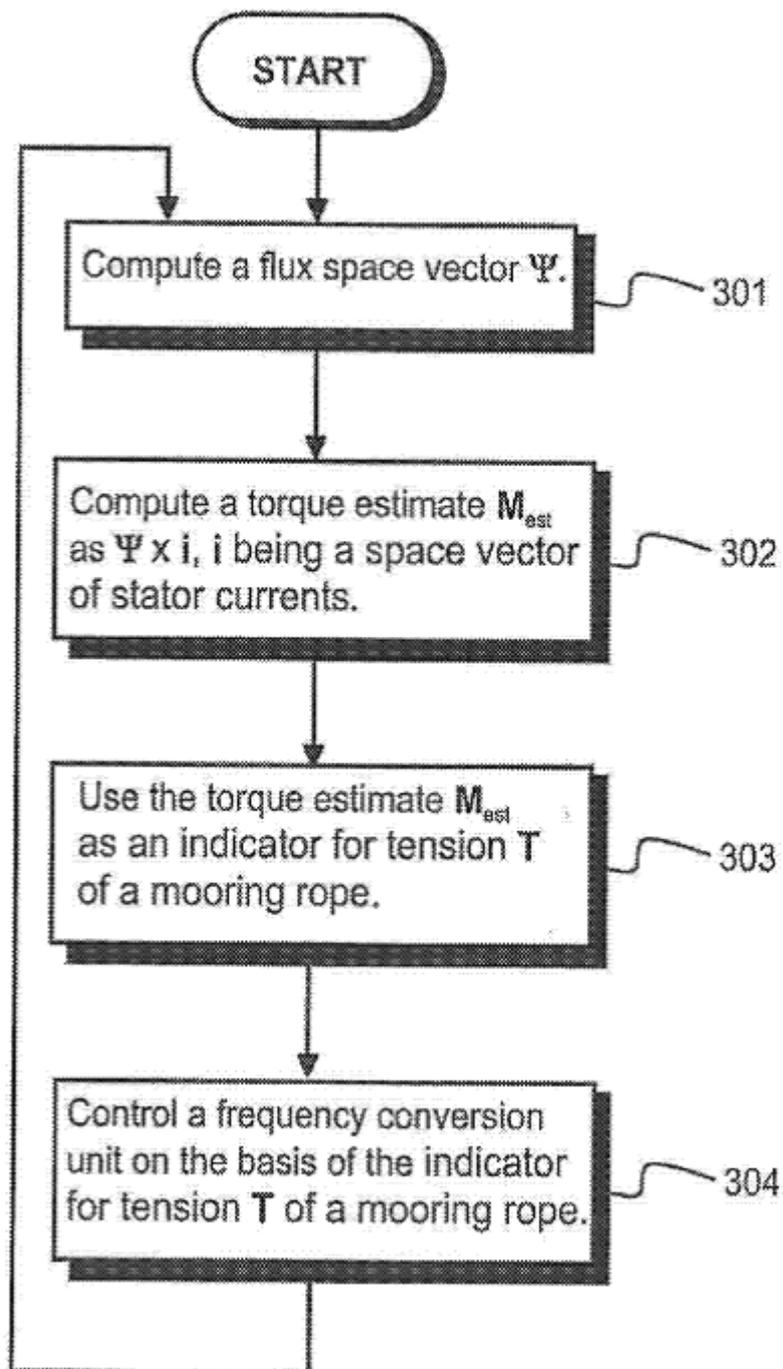
[N: electrical]

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 1/505](#)

US 2010/0116191



B66D 1/52

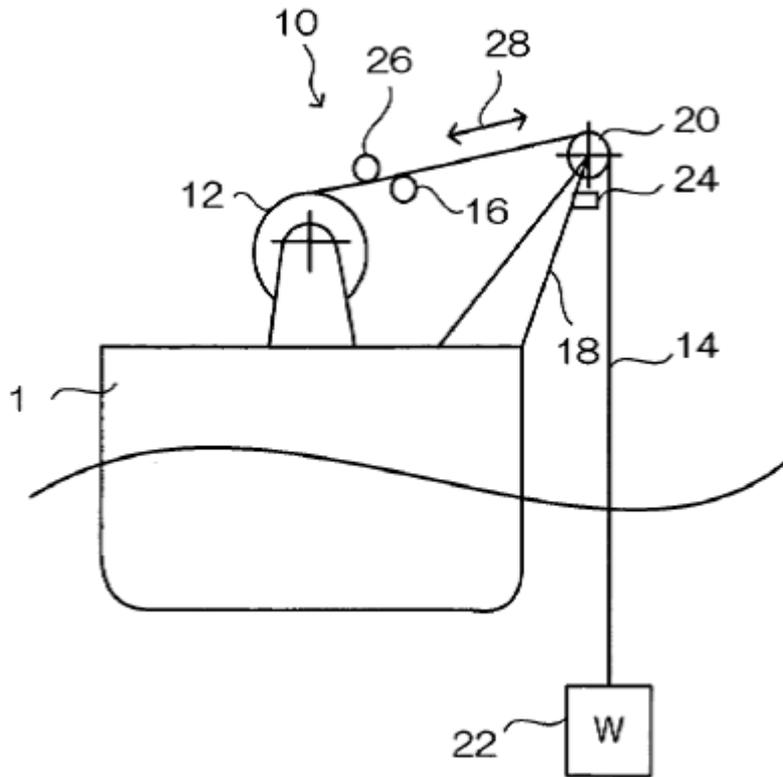
for varying rope or cable tension, e.g. when recovering craft from water

Definition statement

This subclass/group covers:

Compensates for motion of load

see for example US 7 775 383



References relevant to classification in this group

This subclass/group does not cover:

Swell compensation controls for cranes	B66C 13/02
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B66D 1/525

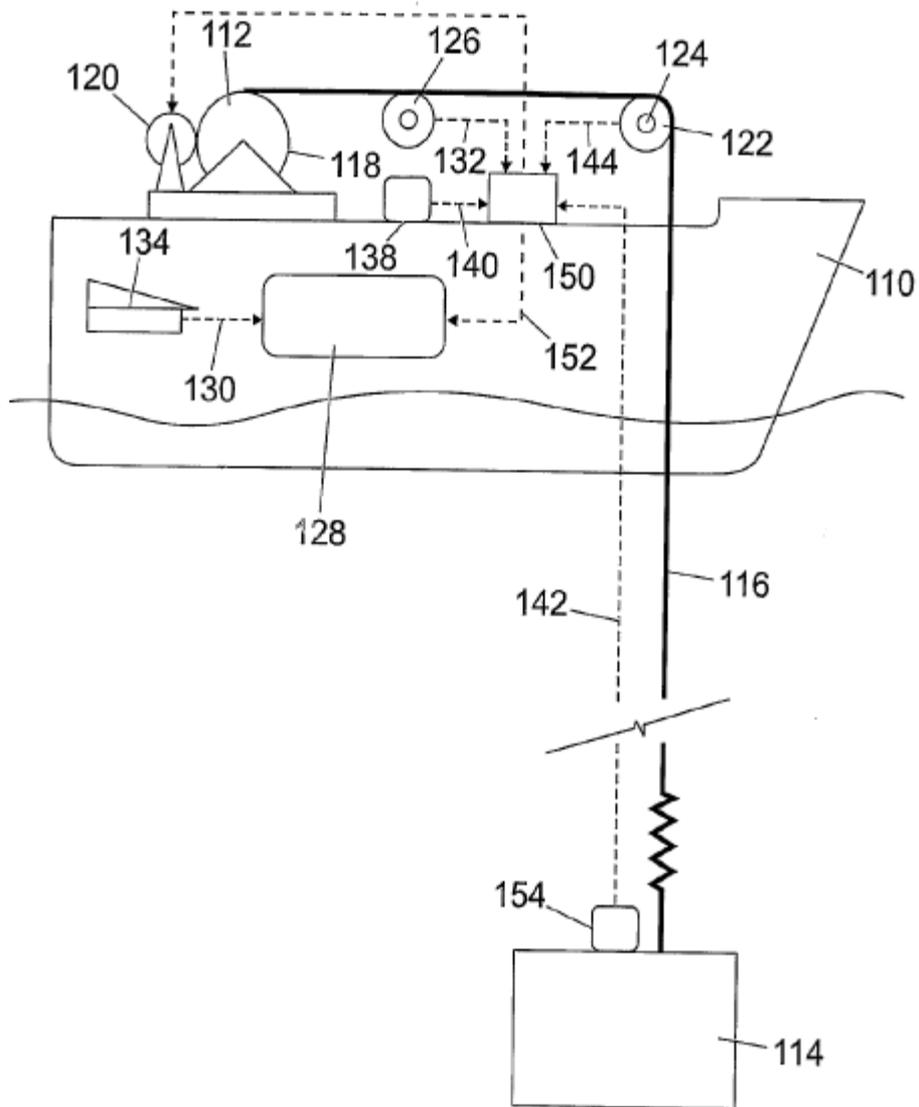
[N: electrical]

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 1/525](#)

US 2007/0272906



B66D 1/54

Safety gear

References relevant to classification in this group

This subclass/group does not cover:

Safety gear for cranes	B66C 15/00
------------------------	----------------------------

B66D 1/56

Adaptations of limit switches

Definition statement

This subclass/group covers:
Responsive to cable length or position

References relevant to classification in this group

This subclass/group does not cover:

Limit switch arrangements for cranes	B66C 13/50
Limit switch arrangements for portable winches	B66D 3/24

B66D 1/60

adapted for special purposes

References relevant to classification in this group

This subclass/group does not cover:

Vehicle mounted winches	B66D 1/00
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B66D 1/605

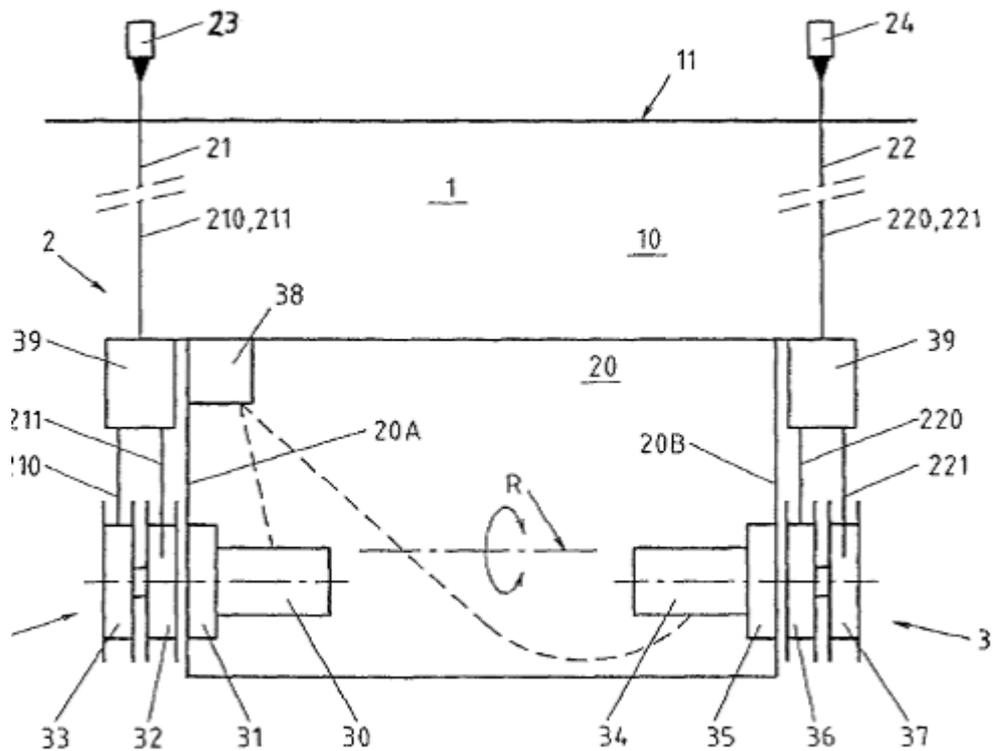
[N: scaffolding winches (B66D1/74 takes precedence)]

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 1/605](#)

US 6 688 582



Relationship between large subject matter areas

Also classified in [E04G 3/32](#)

B66D 1/62

for actuating grab buckets (electrical control in cranes B66C13/32)

Special rules of classification within this group

This subgroup not used. Documents are classified in [B66C 3/06](#) to [B66C 3/125](#)

B66D 1/64

by means of a single rope or chain

Special rules of classification within this group

This subgroup not used. Documents are classified in [B66C 3/06](#) to [B66C 3/125](#)

B66D 1/66

driven by a single motor

Special rules of classification within this group

This subgroup not used. Documents are classified in [B66C 3/06](#) to [B66C 3/125](#)

B66D 1/68

driven by two motors

Special rules of classification within this group

This subgroup not used. Documents are classified in [B66C 3/06](#) to [B66C 3/125](#)

B66D 1/70

driven through planetary or differential gearings

Special rules of classification within this group

This subgroup not used. Documents are classified in [B66C 3/06](#) to [B66C 3/125](#)

B66D 1/72

Anchor-chain sprockets; Anchor capstans

Relationship between large subject matter areas

Also classified in [B63B 21/00](#)

B66D 1/74

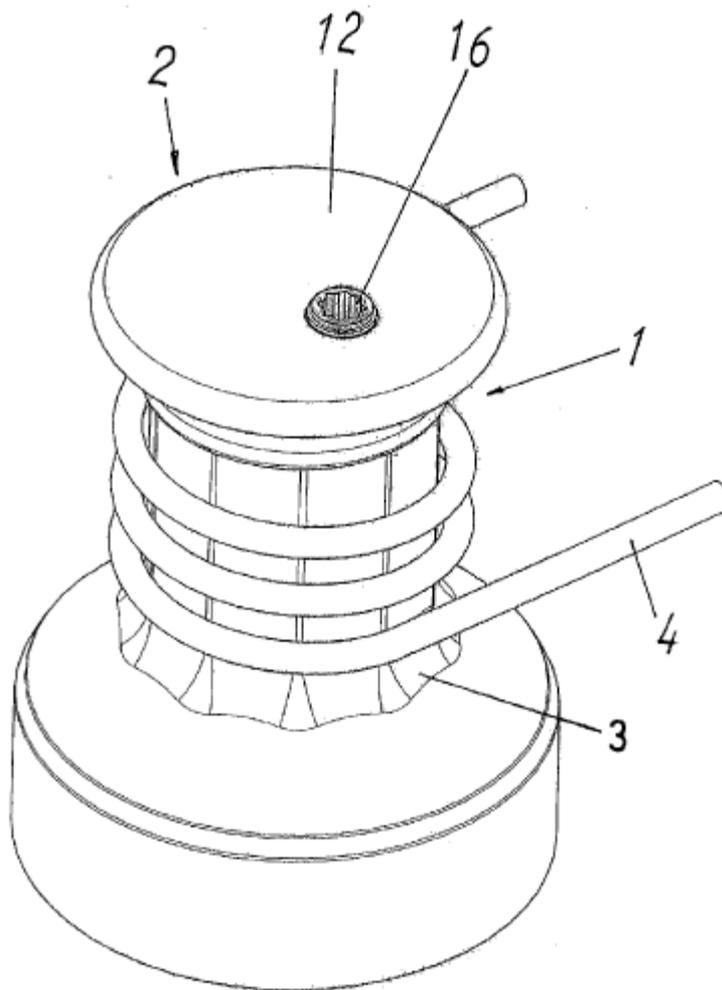
Capstans

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 1/74](#)

US 2010/0242824



References relevant to classification in this group

This subclass/group does not cover:

Non driven bollards	B63B 21/10
Drive handles in general	G05G 1/085

B66D 1/7405

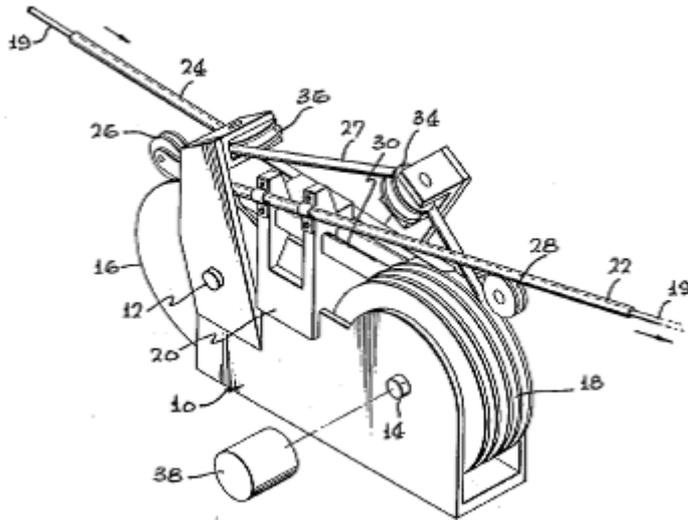
[N: having two or more drums providing tractive force]

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 1/7405](#)

see for example US 4 634 102



B66D 1/741

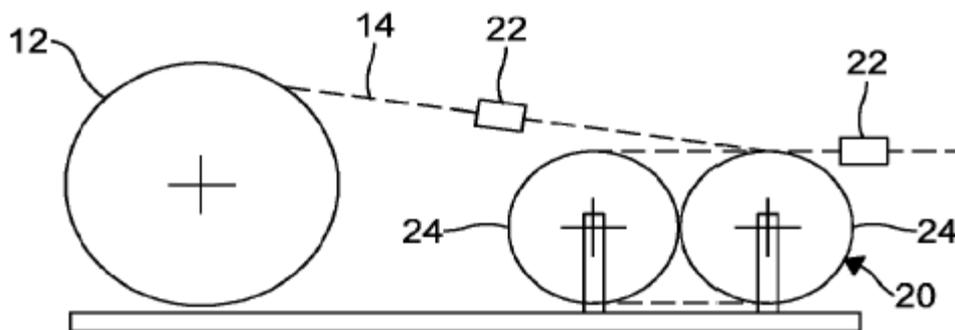
[N: and having rope storing means]

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 1/741](#)

US 2010/0262384



B66D 1/7415

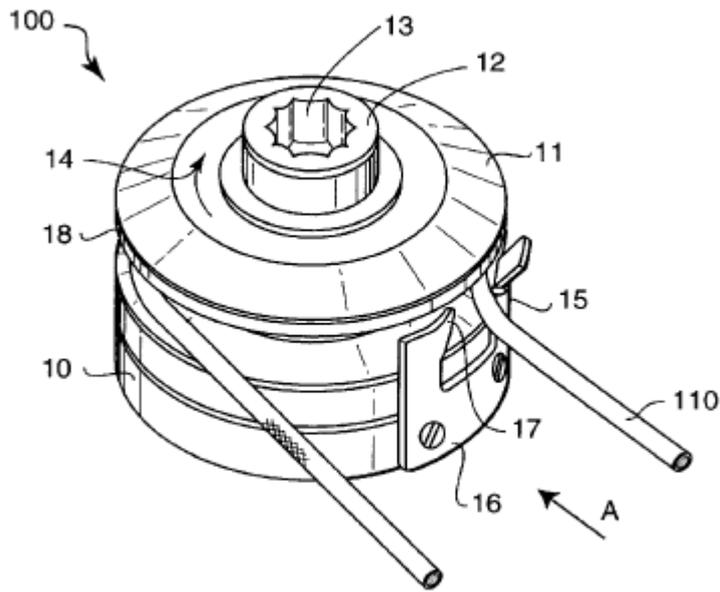
[N: Friction drives, e.g. pulleys, having a cable winding angle of less than 360 degrees]

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 1/7415](#)

US 6 070 858



B66D 1/7494

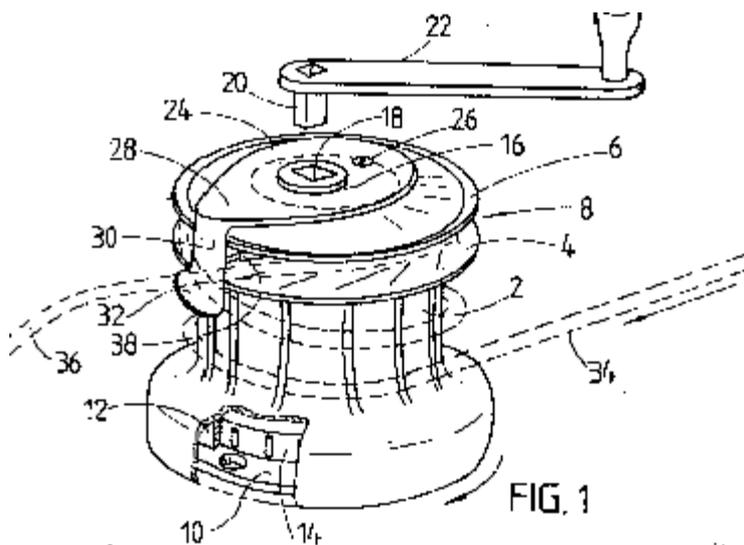
[N: self-tailing capstans]

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 1/7494](#)

US 4 595 173



B66D 1/76

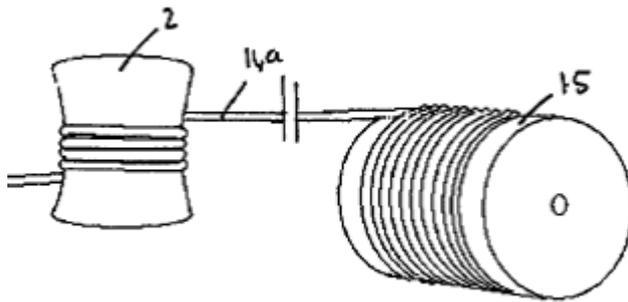
having auxiliary drums or barrels for storing the ropes or cables

Definition statement

This subclass/group covers:

Includes capstans with drum and capstans with storage compartment

see for example EP 1 985 575



B66D 1/78

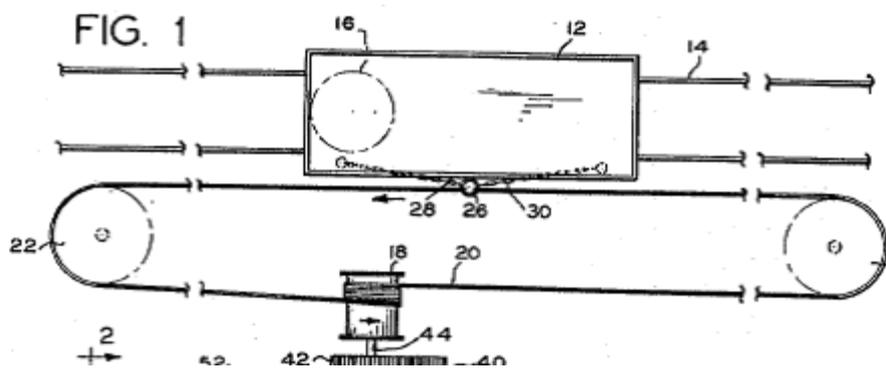
for shunting, e.g. in marshalling yards

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 1/78](#)

US 3 502 301



B66D 1/80

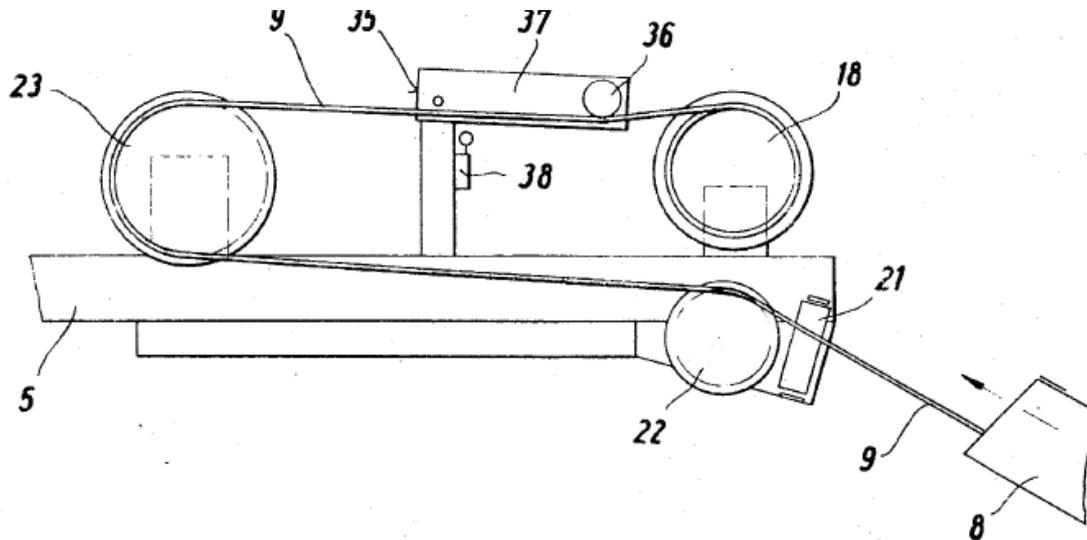
for scrapers

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 1/80](#)

US 3 488 036



Relationship between large subject matter areas

Also classified in [E02F 3/46](#)

B66D 1/82

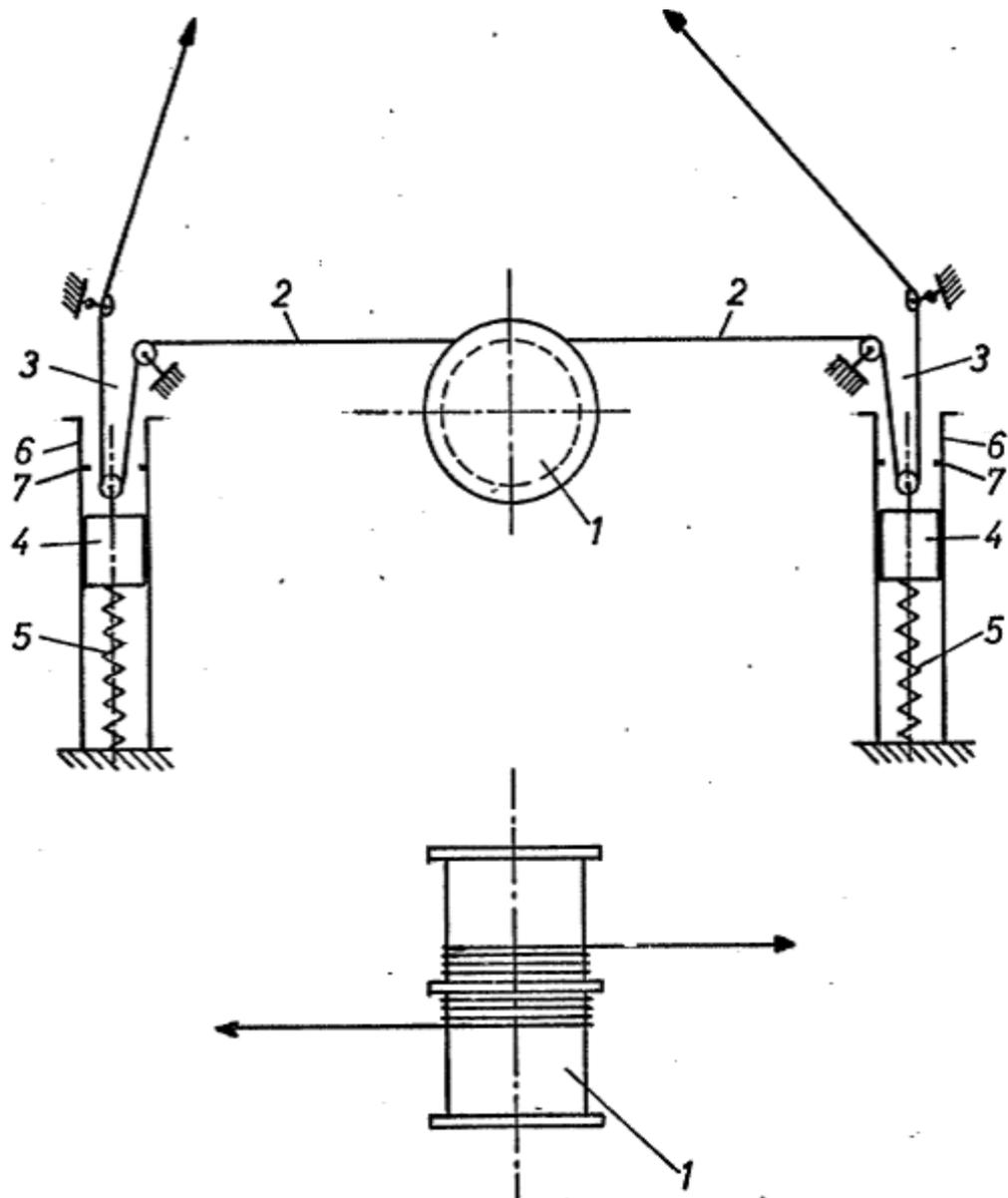
for slewing and hoisting by means of derricks

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 1/82](#)

DE 24 10 784



B66D 3/00

Portable or mobile lifting or hauling appliances

B66D 3/003

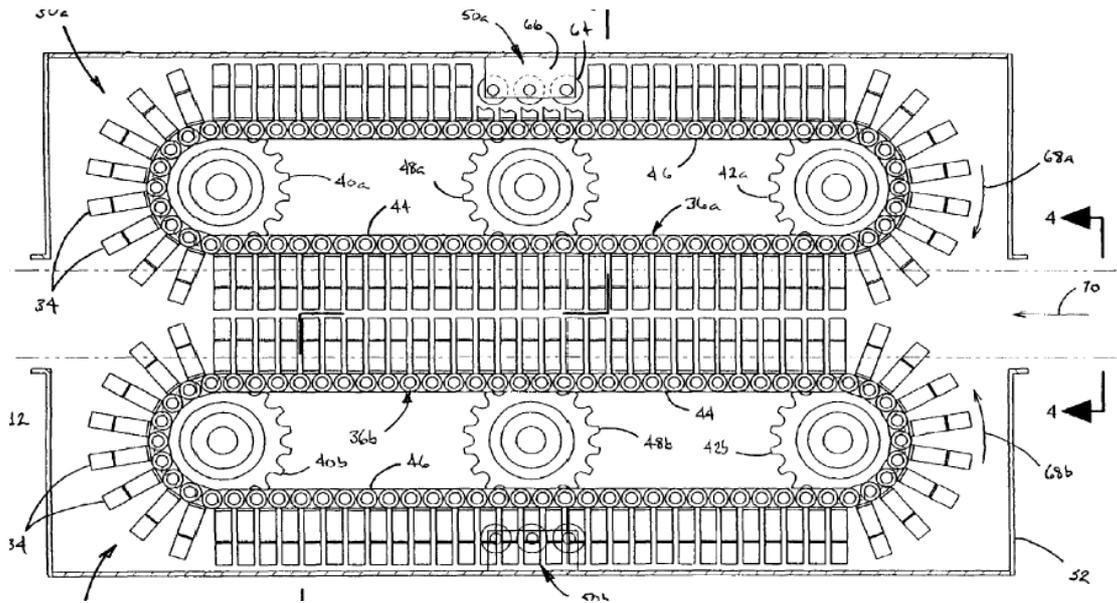
[N: using two or more cooperating endless chains]

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 3/003](#)

US 7 682 106



B66D 3/006

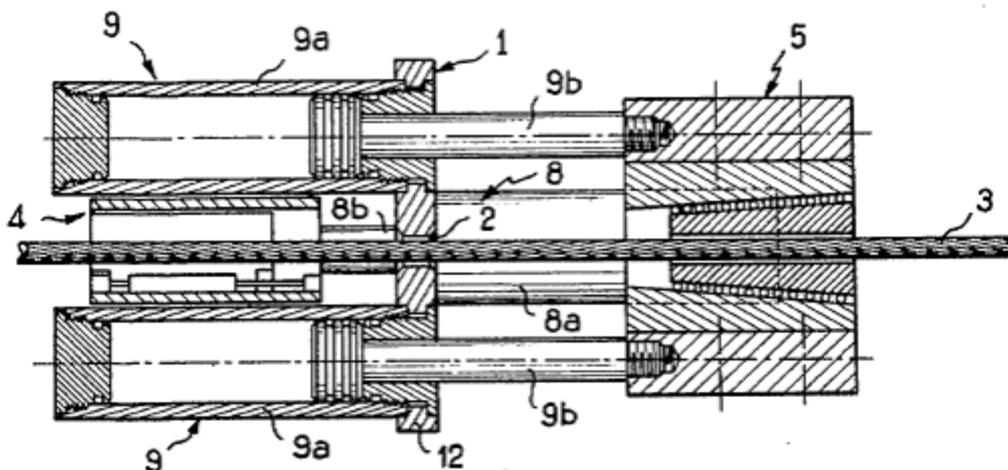
[N: Power actuated devices operating on ropes, cables, or chains for hauling in a mainly horizontal direction (B66D3/003 takes precedence)]

Definition statement

This subclass/group covers:

Also includes similar devices which may be used for lifting.

US 4 615 509



Also includes similar devices which may be used for lifting.

B66D 3/02

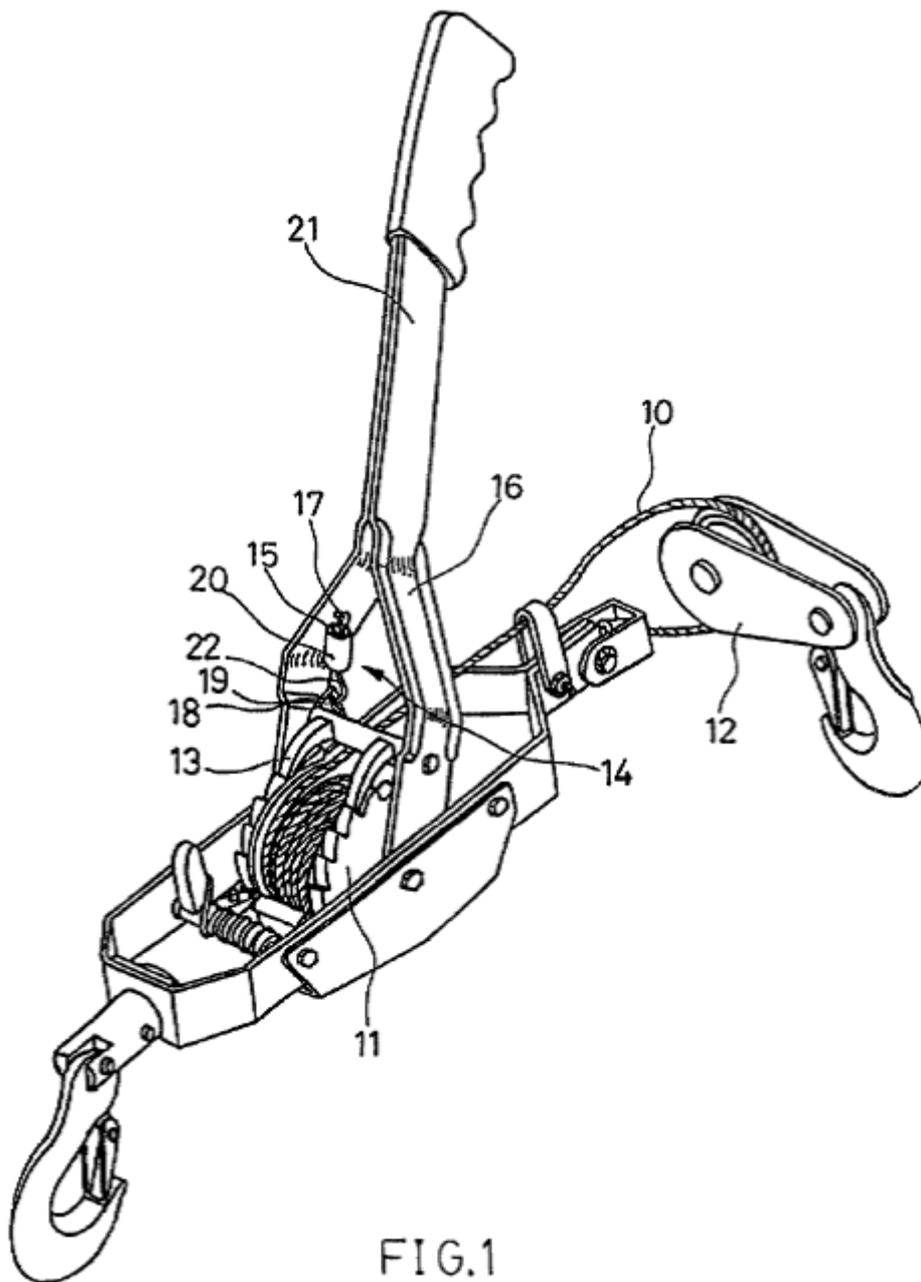
Manually-operated, e.g. lever-actuated, devices operating on ropes, cables, or chains for hauling in a mainly horizontal direction (B66D3/04, B66D3/12 take precedence)

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 3/02](#)

US 2003/0085392



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 F16H55/00)

Relationship between large subject matter areas

sheaves [F16H 55/04](#)

B66D 3/043

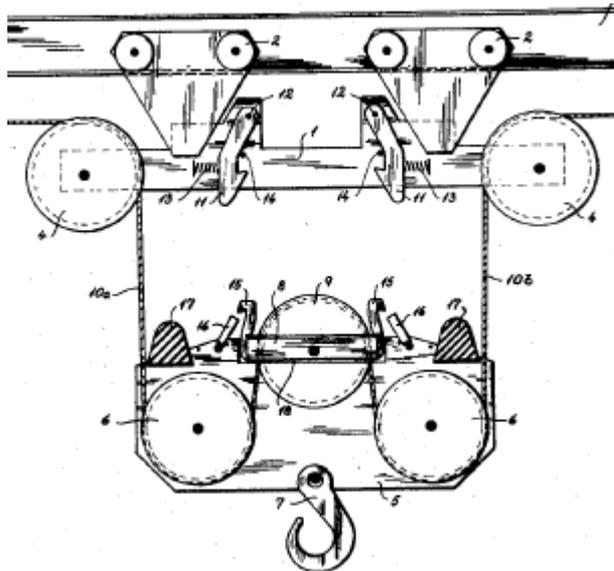
[N: Block and tackle system with variable number of cable parts]

Definition statement

This subclass/group covers:

Where the number of active pulleys can be varied e.g. to alter the mechanical advantage.

see for example US 3 794 185



B66D 3/046

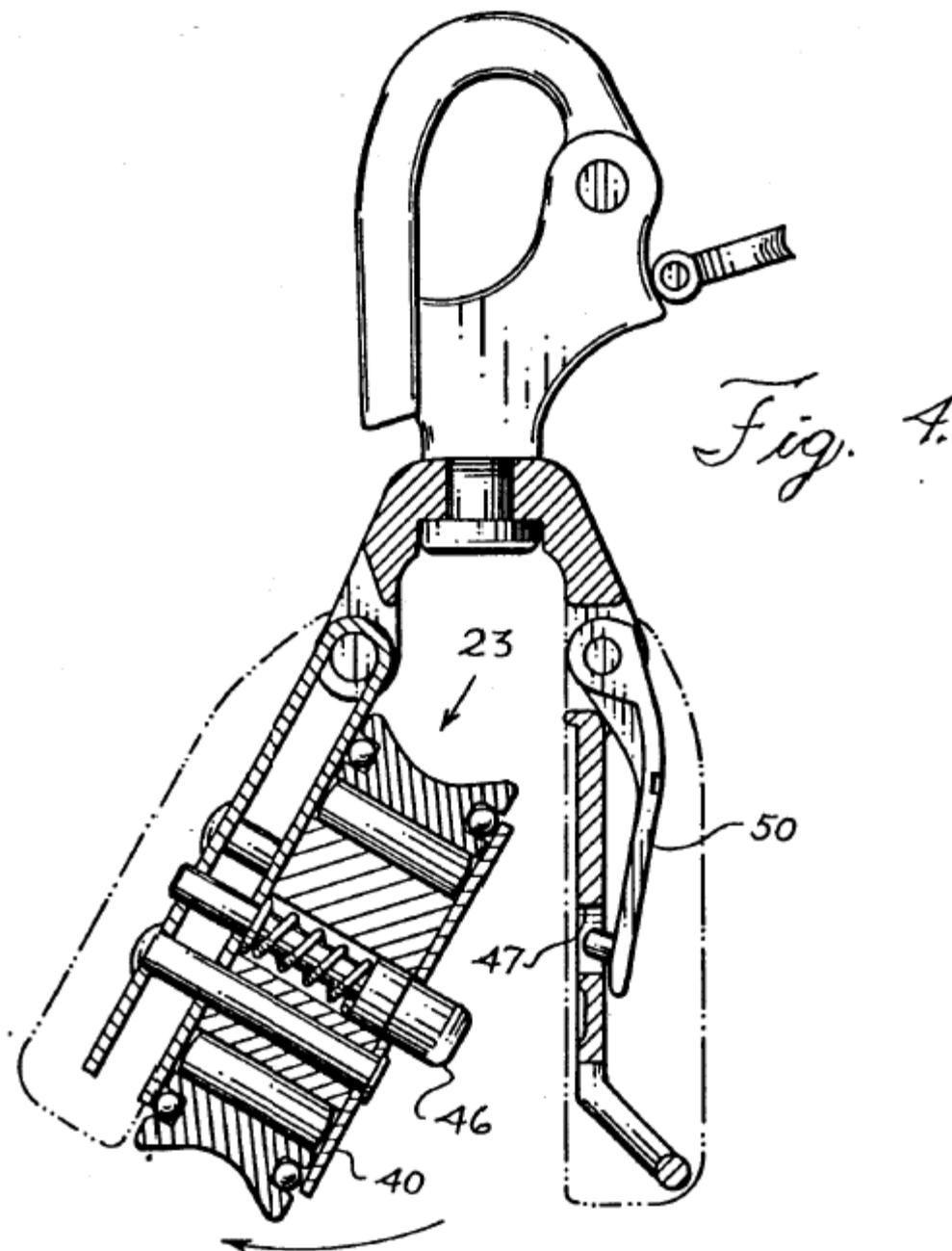
[N: Openable pulley blocks]

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 3/04](#)

US 5 249 543



B66D 3/06

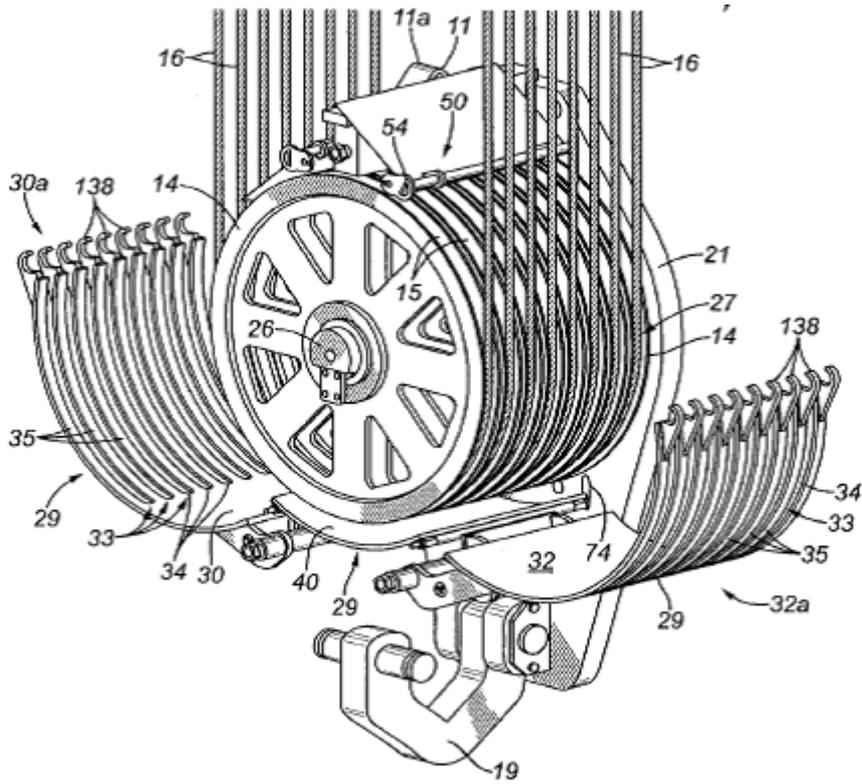
with more than one pulley

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 3/06](#)

US 6 386 516



B66D 3/10

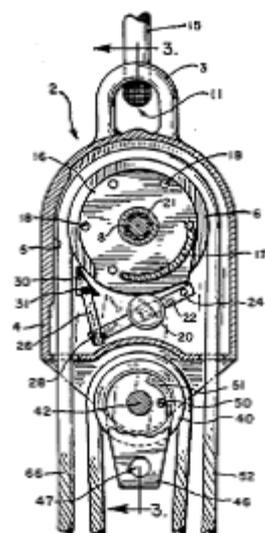
Applications of braking or detent devices

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 3/10](#)

US 4 934 660



B66D 3/14

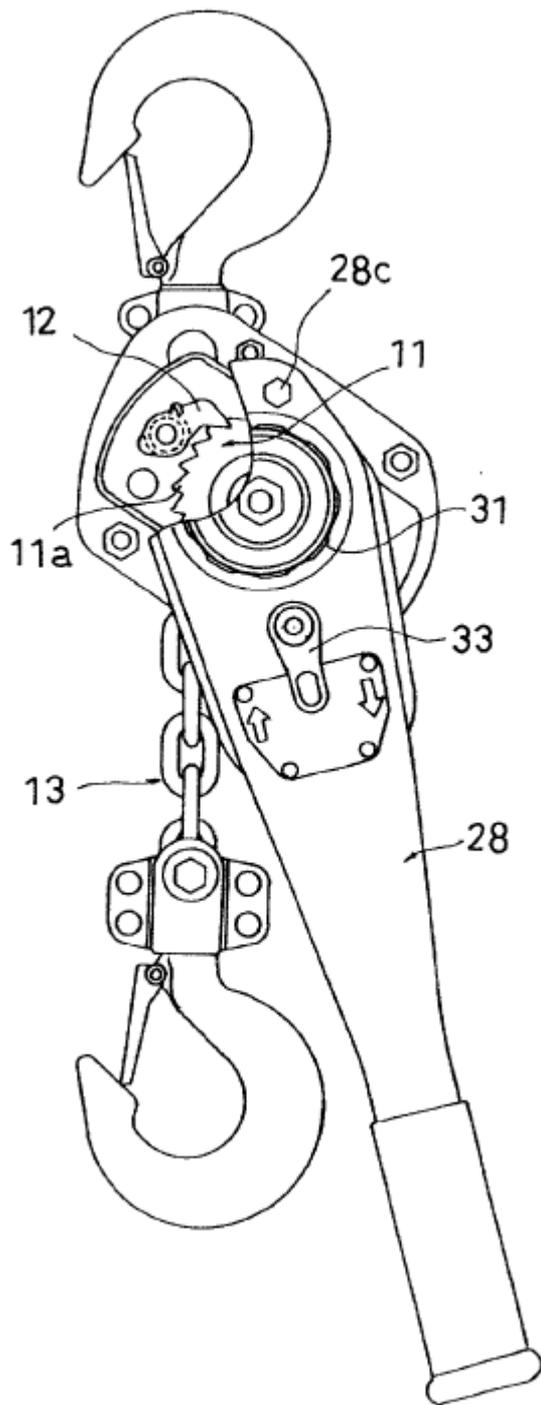
lever operated

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 3/14](#)

US 2002/0153519



B66D 3/16

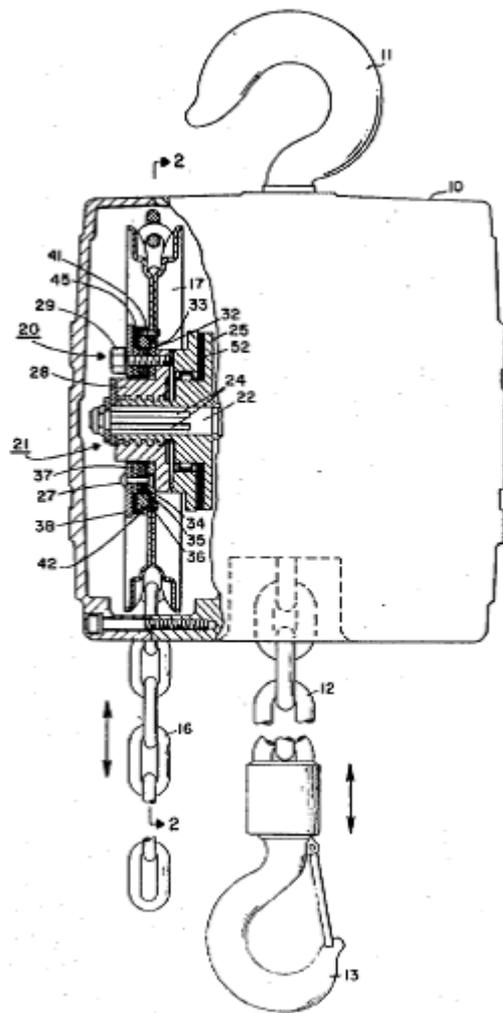
operated by an endless chain passing over a pulley or a sprocket

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 3/16](#)

US 3 542 341

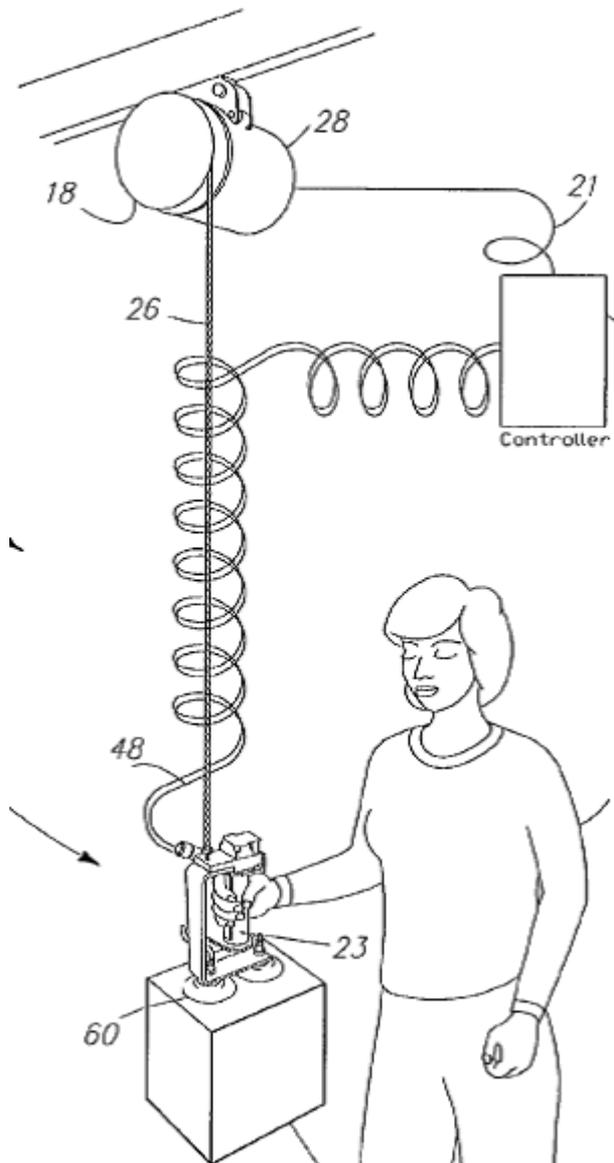


B66D 3/18

Power-operated hoists

Definition statement

This subclass/group covers:
Includes pneumatic load-balancing winches
see for example US 2003/0057408



B66D 3/20

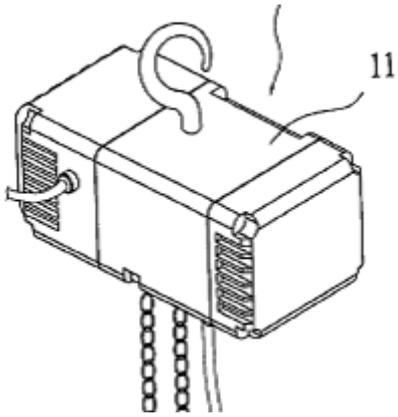
with driving motor, e.g. electric motor, and drum or barrel contained in a common housing

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 3/20](#)

US 2008/0265810



B66D 3/22

with variable-speed gearings between driving motor and drum or barrel

Definition statement

This subclass/group covers:

Also includes drives with a single gear ratio.

See for example US 3 971 971

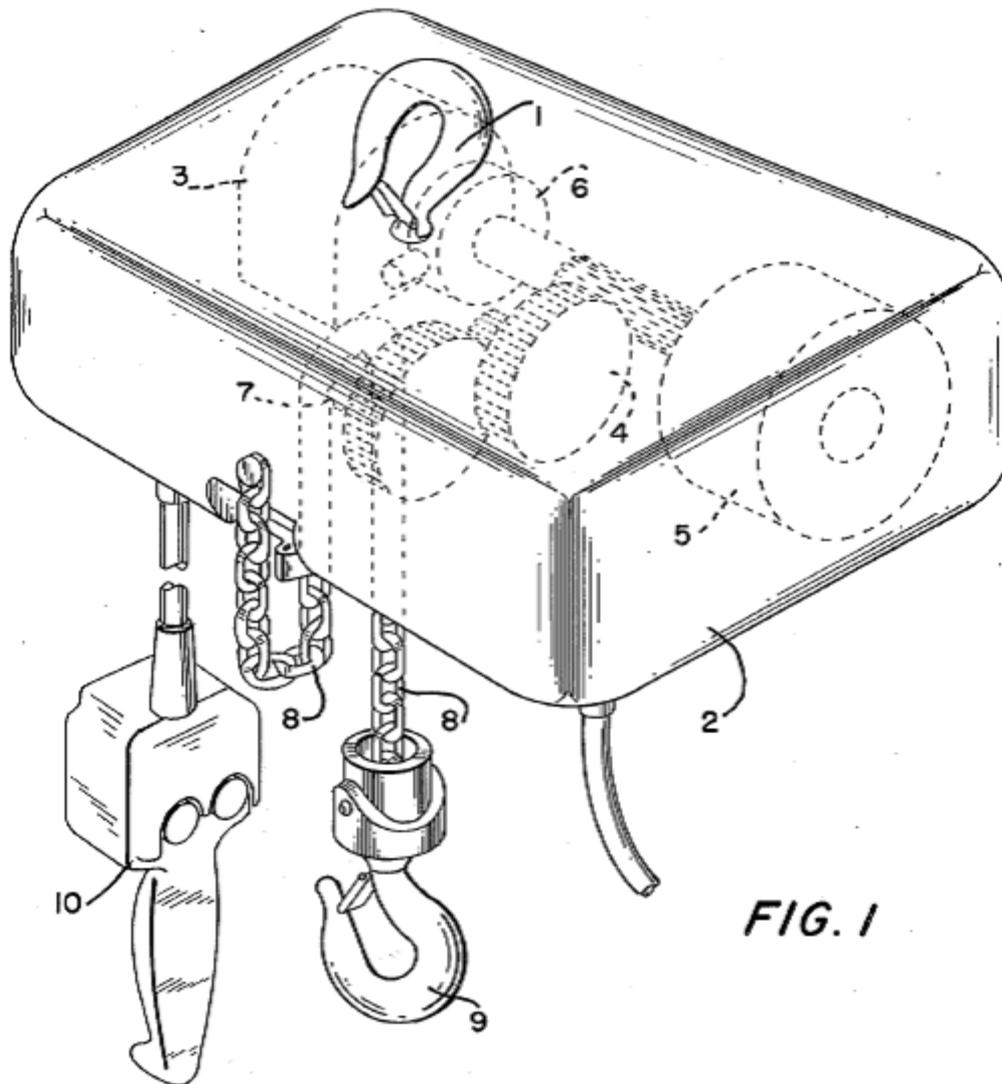


FIG. 1

B66D 3/24

Applications of limit switches

References relevant to classification in this group

This subclass/group does not cover:

Limit switch arrangements for cranes	B66C 13/50
Limit switch arrangements for large winches	B66D 1/56

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 B66D3/10)

Definition statement

This subclass/group covers:

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

References relevant to classification in this group

This subclass/group does not cover:

Braking devices operating on lift structures	B66B 5/16
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B66D 5/02

Crane, lift hoist, or winch brakes operating on drums, barrels, or ropes

Definition statement

This subclass/group covers:

Includes regenerative braking and non-specified braking arrangements

B66D 5/023

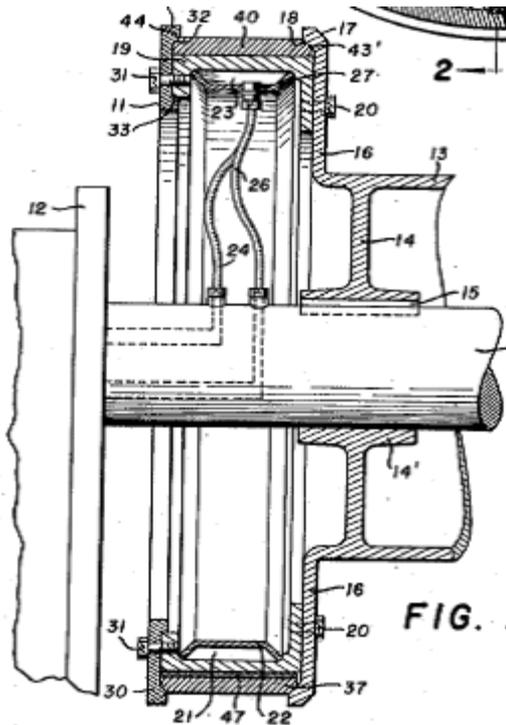
[N: Cooling of brakes (in general F16D)]

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 5/023](#)

US 2 850 125



References relevant to classification in this group

This subclass/group does not cover:

General brake cooling	F16D
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B66D 5/026

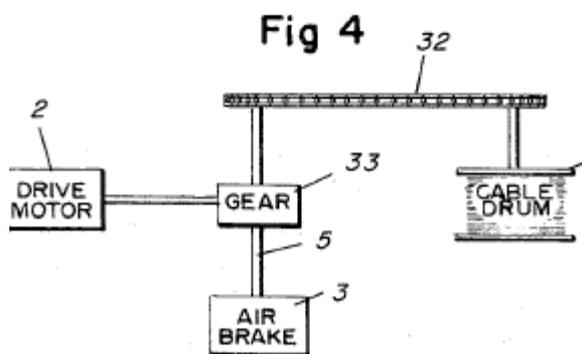
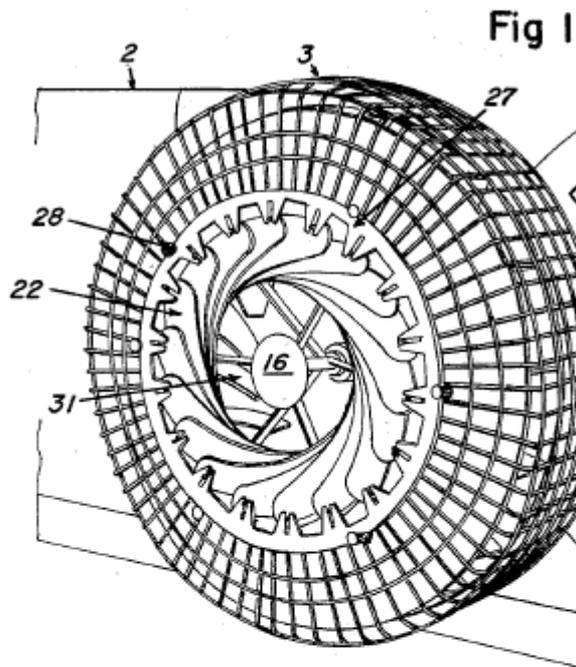
[N: Fluid-resistance brakes]

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 5/026](#)

US 3 158 231



B66D 5/04

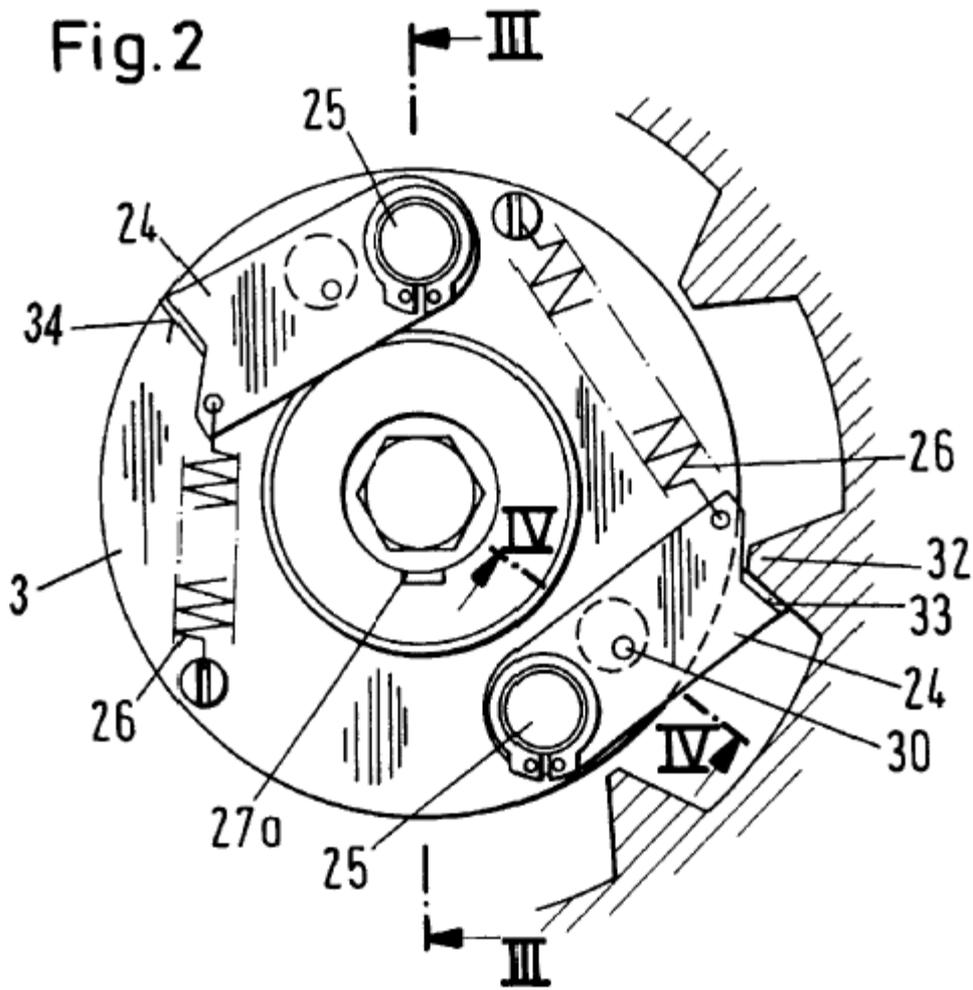
actuated by centrifugal force

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 5/04](#)

US 6 578 822



B66D 5/08

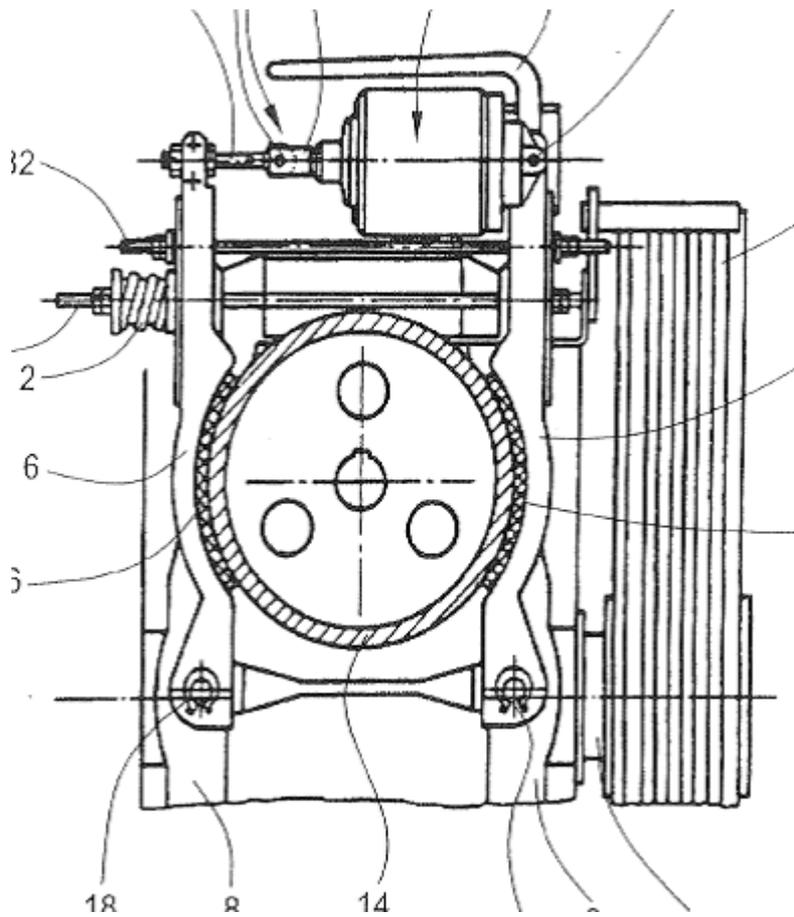
embodying blocks or shoes

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 5/08](#)

US 2011/0011682



B66D 5/10

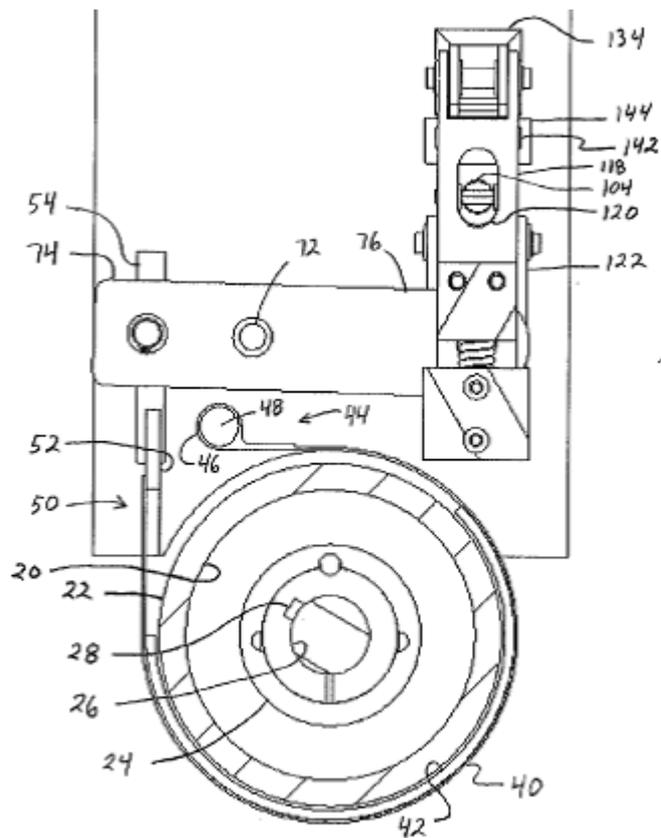
embodying bands

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 5/10](#)

US 2011/0001102



B66D 5/12

with axial effect (B66D5/22 takes precedence)

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 5/12](#)

US 7 857 289

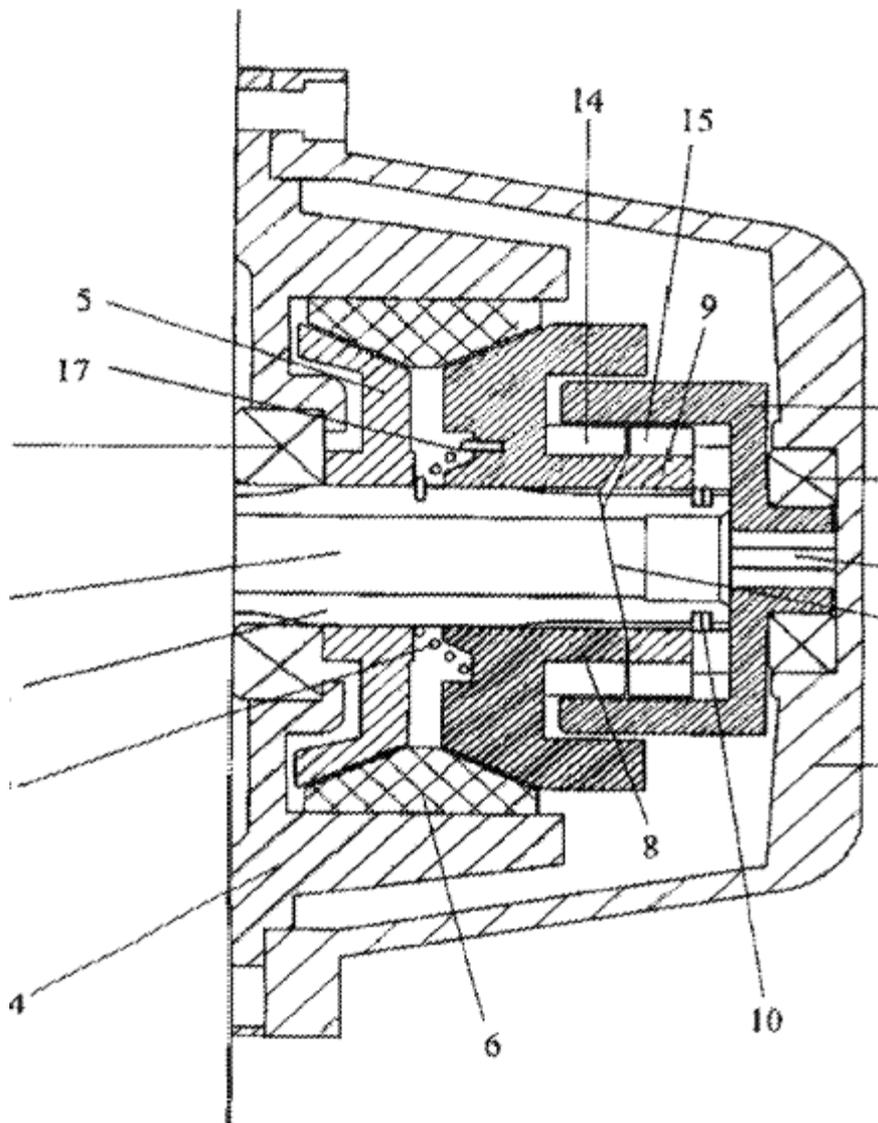


Fig. 2

B66D 5/14

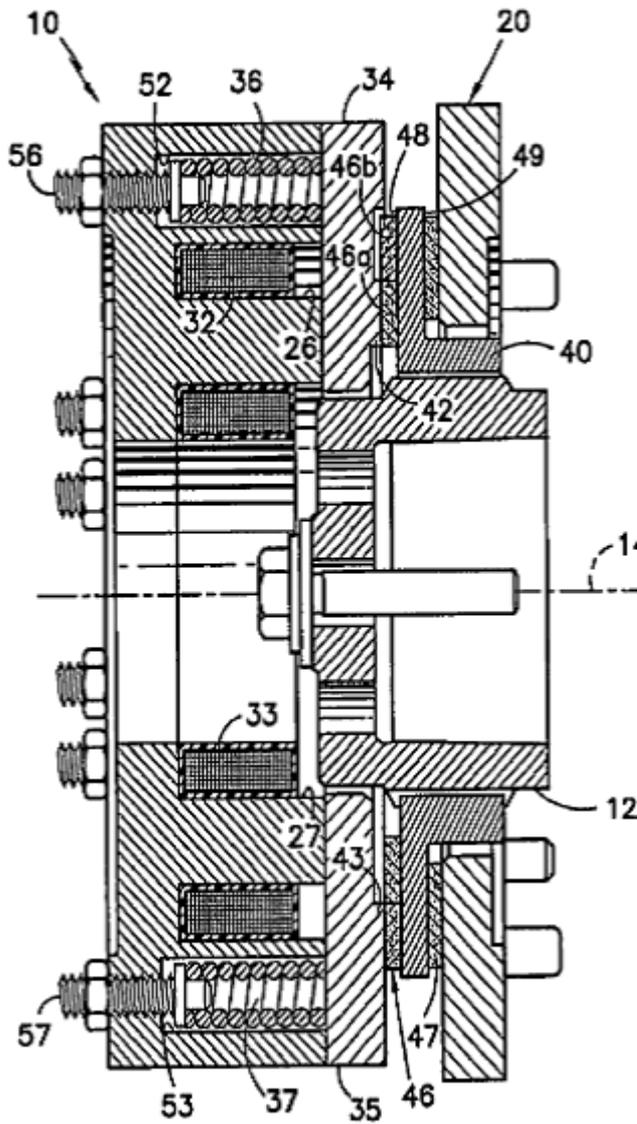
embodying discs

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 5/14](#)

US 2006/0151254



B66D 5/16

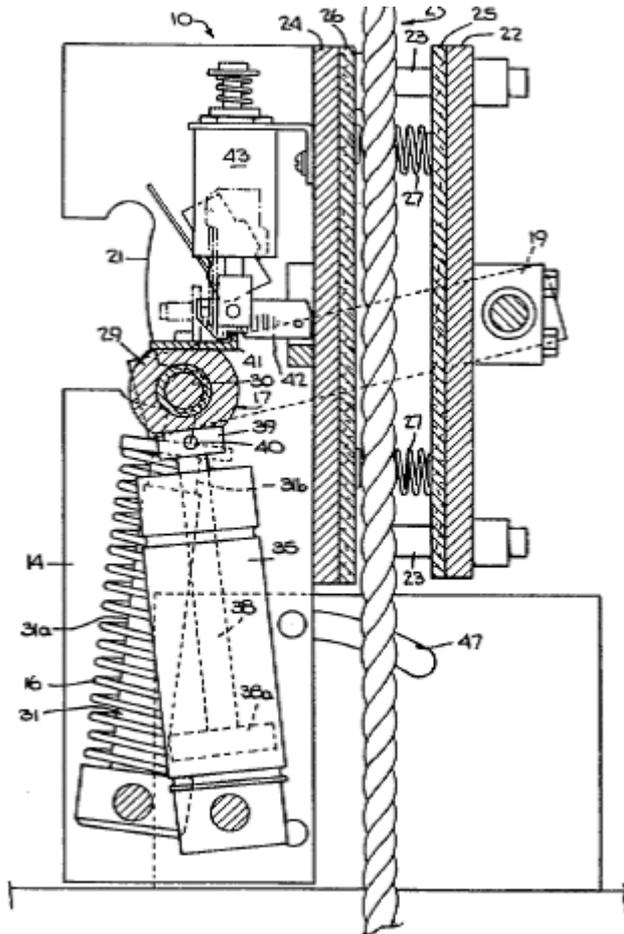
for action on ropes or cables

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 5/16](#)

US 5 228 540



B66D 5/18

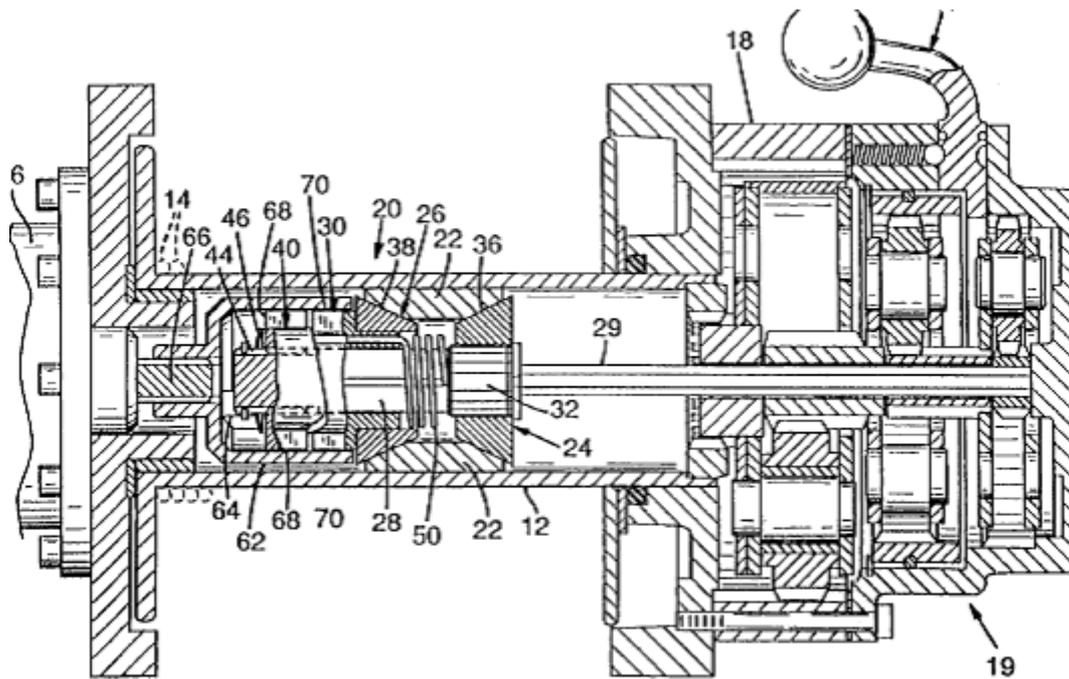
for generating braking forces which are proportional to the loads suspended; Load-actuated brakes

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 5/18](#)

US Re. 36 216



B66D 5/22

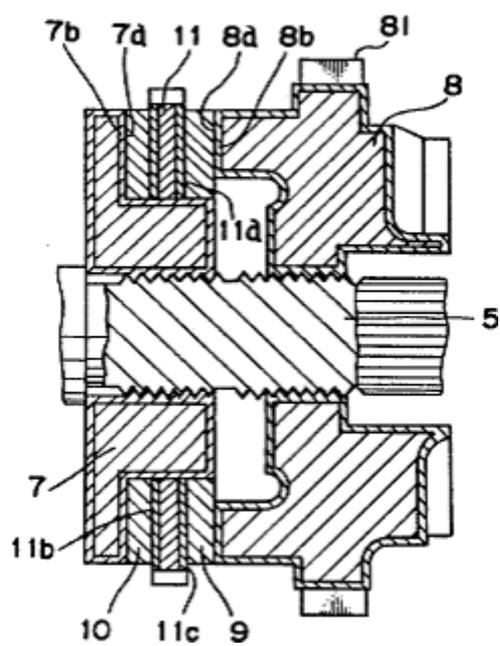
with axial effect

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 5/22](#)

US 5 330 036



B66D 5/24

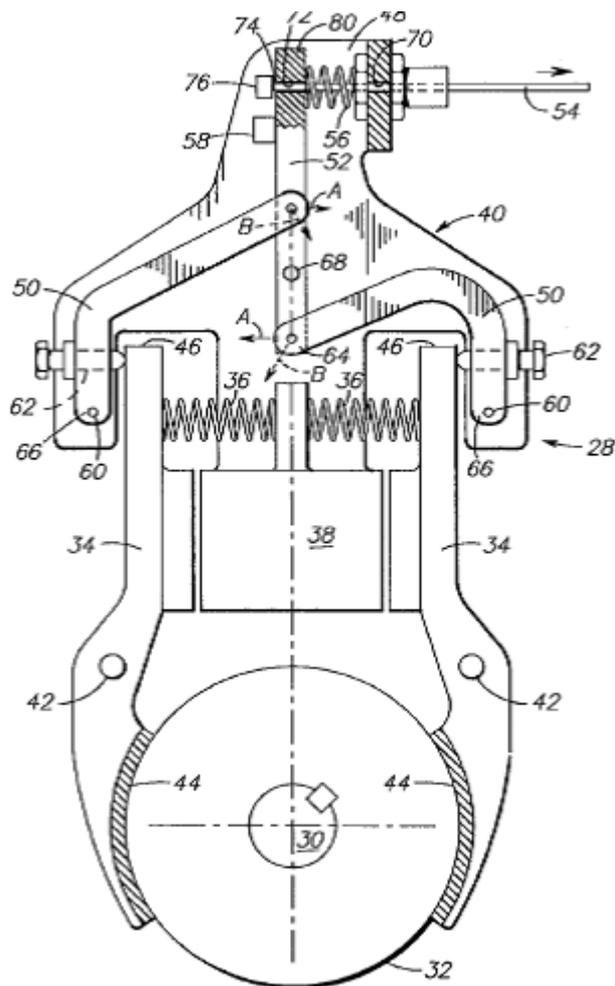
Operating devices

Definition statement

This subclass/group covers:

Includes brake testing arrangements; overload protection

see for example US



B66D 5/26

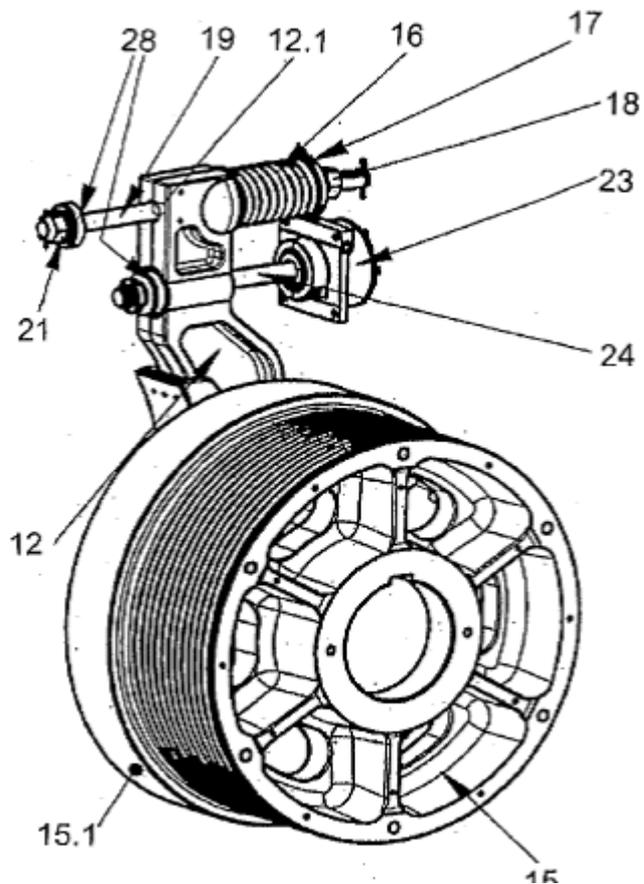
pneumatic or hydraulic

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 5/26](#)

US 2003/0155184



B66D 5/30

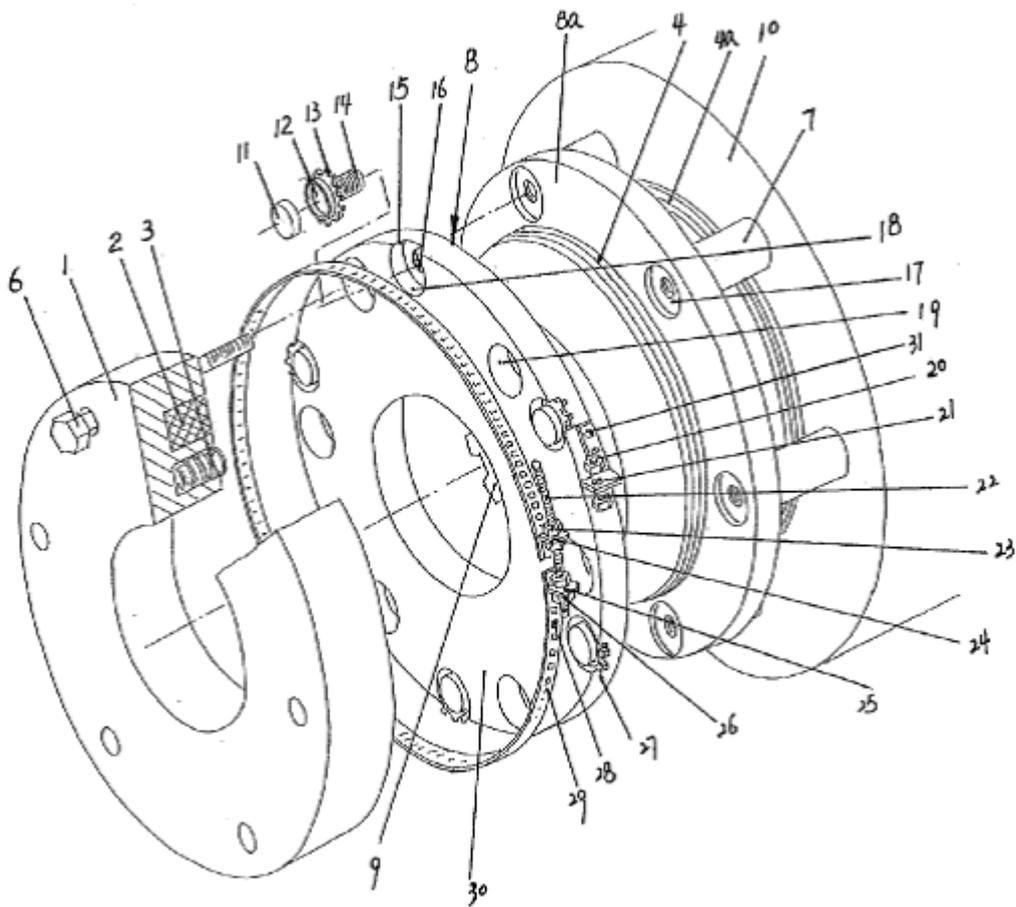
electrical

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 5/30](#)

US 2009/0260927



B66D 5/32

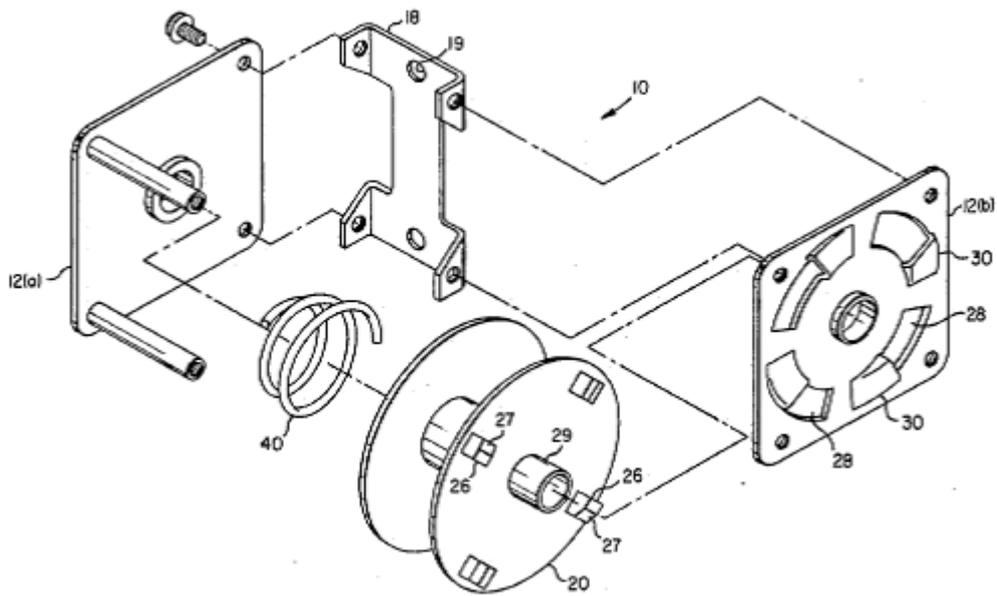
Detent devices

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 5/32](#)

see for example US 5 004 177



B66D 5/34

having latches

Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in [B66D 5/34](#)

US 2006/0186388

