

## F16G

### **BELTS, CABLES, OR ROPES, PREDOMINANTLY USED FOR DRIVING PURPOSES; CHAINS; FITTINGS PREDOMINANTLY USED THEREFOR**

#### **Definition statement**

*This place covers:*

Belts, e.g. V-belts, cables, ropes or chains that are specially adapted for transferring power/force from an input point to an output point to move or drive at least one mechanical part.

The belts, cables, ropes or chains being either

formed into a loop that is intended to travel around an endless path and engage two or more pulleys, sprockets or similar rotating elements and transfer power/force while travelling along its path; or

an elongated element that is intended to travel backward or forward along a path to transfer power/force between one point along its length to another point along its length, e.g. from a drum to a load.

Chains, e.g. hauling- or hoisting-chains, that are not specially adapted for transferring power/force.

Fittings and attachments primarily intended to be connected to or used with the above types of belts, cables, ropes or chains. These include:

means for fastening ends of belts together to form closed loops, e.g. fastenings for conveyor belts or V-belts;

means for fastening cables or ropes to one another or to other objects;

caps or sleeves for fixing on cables or ropes;

means for coupling chains;

components of chains, e.g. shackles, swivels, chain joints, chain links or chain bushes;

hooks as integral parts of chains.

## F16G 1/00

### **Driving-belts (V-belts [F16G 5/00](#); conveyor belt [B65G](#))**

#### **Definition statement**

*This place covers:*

Belts adapted for transferring power/force from an input point to an output point to move or drive at least one mechanical part.

Belts being either formed into a loop that is intended to travel around an endless path and engage two or more pulleys, sprockets or similar rotating elements and transfer power/force while travelling along its path; or an elongated element that is intended to travel backward or forward along a path to transfer power/force between one point along its length to another point along its length, e.g. from a drum to a load.

## References

### Limiting references

*This place does not cover:*

Producing belts of plastics	<a href="#">B29D 29/00</a>
Endless conveyor belts	<a href="#">B65G 15/30</a>
Making driving belts of leather	<a href="#">C14B 9/00</a>
Testing of belts	<a href="#">G01M 13/023</a>

### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Woven fabrics designed to make specified articles	<a href="#">D03D 1/00</a>
Gearings using endless flexible members	<a href="#">F16H 7/00</a> , <a href="#">F16H 9/00</a>
Belts specially adapted for gearings with variable ratio by using endless flexible members	<a href="#">F16H 9/24</a>
Preventing or carrying off electrostatic charges	<a href="#">H05F</a>

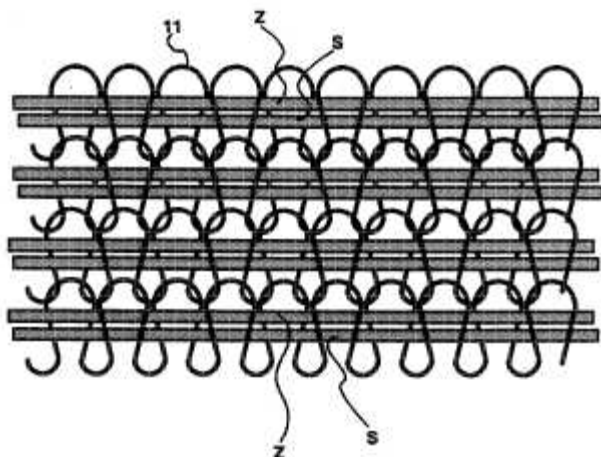
## F16G 1/04

made of fibrous material, e.g. textiles, whether rubber-covered or not ([F16G 1/28](#) takes precedence; making thereof [D03D](#) {; consisting of several parts [F16G 1/22](#)})

### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group (US5429555):



## F16G 1/06

made of rubber ([F16G 1/28](#) takes precedence {; consisting of several parts [F16G 1/22](#)}; making thereof [B29D 29/00](#) )

### Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Rubber	polymer containing dienes (see main groups <a href="#">C08L 7/00</a> - <a href="#">C08L 21/00</a> and depending lower groups), e.g. HNBR, CR, acrylonitrile butadiene rubber ("NBR"), styrene-butadiene rubber ("SBR"), alkylated chlorosulfonated polyethylene ("ACSM"), epichlorohydrin, butadiene rubber ("BR"), natural rubber ("NR"), ethylene alpha olefin elastomers, ethylene propylene terpolymer or ethylene propylene diene terpolymer ("EPDM"), ethylene propylene copolymer ("EPM")
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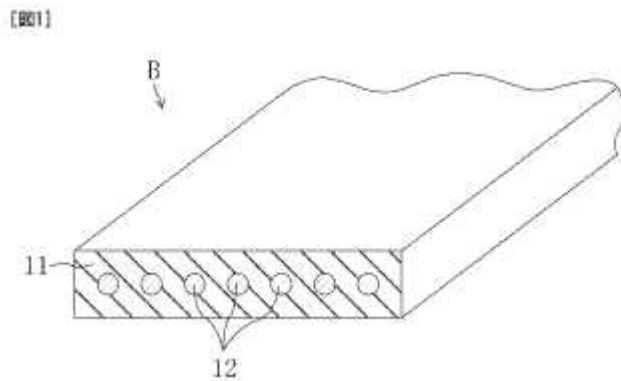
## F16G 1/08

with reinforcement bonded by the rubber

### Definition statement

This place covers:

Illustrative example of subject matter classified in this group (WO2010047029):



## F16G 1/10

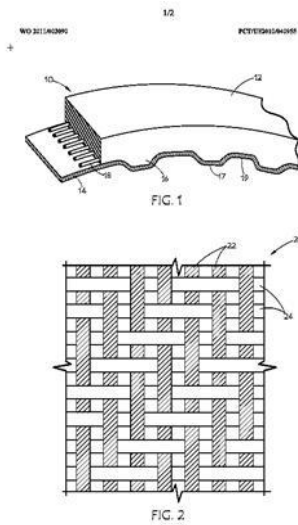
with textile reinforcement

### Definition statement

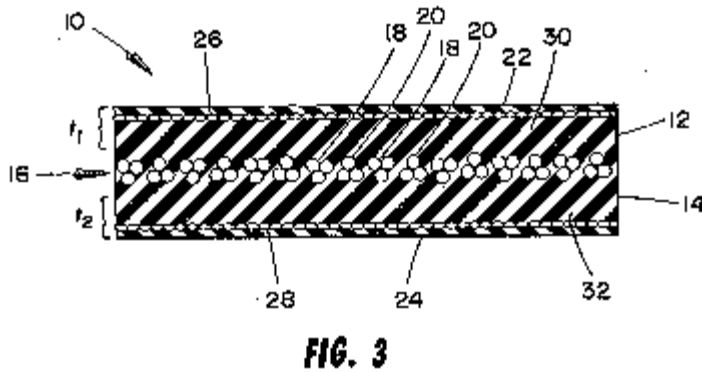
This place covers:

Illustrative example of subject matter classified in this group.

For external use see layer 19 and 20 in WO2011003090:



or internally see inserts 20 of US3911755:

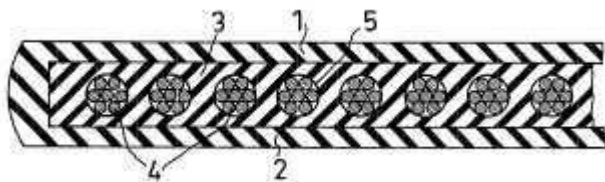


**F16G 1/12**  
**with metal reinforcement**

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group (GB2026940: metal reinforced belt):



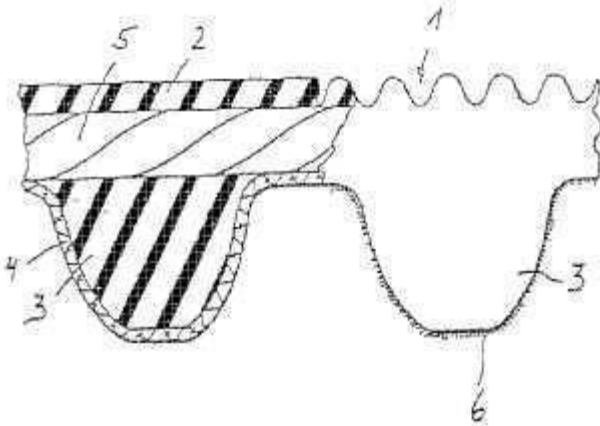
## F16G 1/14

made of plastics ([F16G 1/28](#) takes precedence {; consisting of several parts [F16G 1/22](#)}; making thereof [B29D 29/00](#) )

### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group (WO2007054065: made of thermoplastic):



Example of common plastics are:

Polyester (PES), Polyethylene terephthalate (PET), Polyethylene (PE), High-density polyethylene (HDPE), Polyvinyl chloride (PVC), Polyvinylidene chloride (PVDC), Low-density polyethylene (LDPE), Polypropylene (PP), Polystyrene (PS), High impact polystyrene (HIPS), Polyamides (PA) (Nylons), Acrylonitrile butadiene styrene (ABS), Polycarbonate (PC), Polycarbonate/Acrylonitrile Butadiene Styrene (PC/ABS), Polyurethanes (PU).

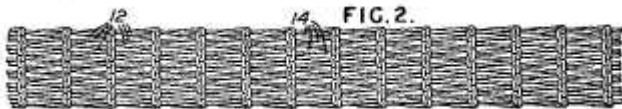
## F16G 1/18

made of wire (making thereof [B21F 43/00](#) {; consisting of several parts [F16G 1/22](#)})

### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group (GB551595):



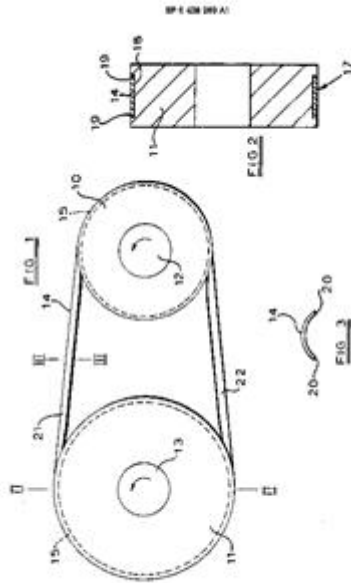
**F16G 1/20**

made of a single metal strip (making thereof [B21D 53/14](#))

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group (EP0428280):

**References****Informative references**

Attention is drawn to the following places, which may be of interest for search:

Making of metallic belts or rings	<a href="#">B21D 53/14</a> , <a href="#">B21D 53/16</a>
Manufacturing of metal belts	<a href="#">B23K 26/00</a>

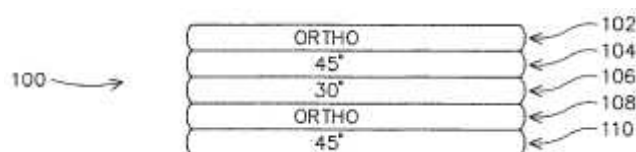
**F16G 1/21**

built-up from superimposed layers, e.g. zig-zag folded

**Definition statement**

*This place covers:*

Illustrative example of subject matter classified in this group (US2004219850):



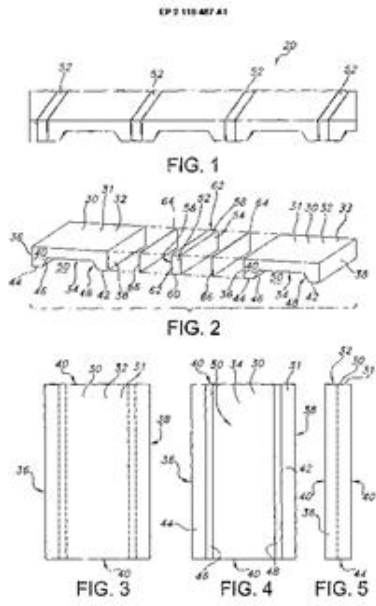
## F16G 1/22

consisting of several parts

### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group (EP2116487):







## F16G 3/003

{Apparatus or tools for joining belts (stapler [B25C 5/00](#))}

### Definition statement

*This place covers:*

Apparatus to insert rivet. Illustrative example (WO2009106013):

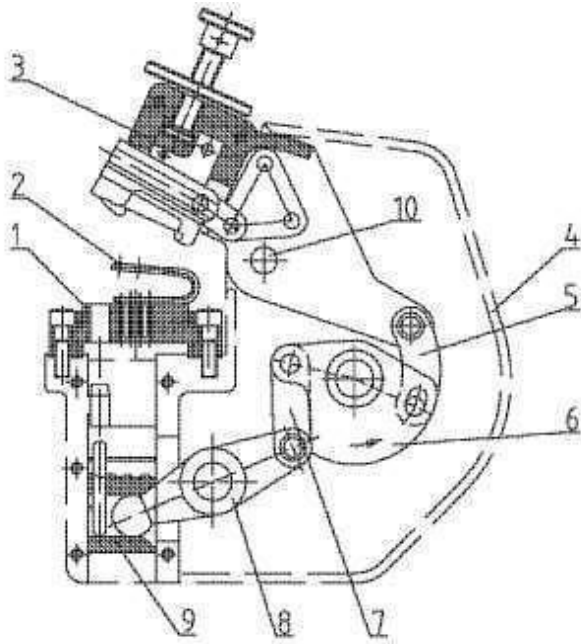
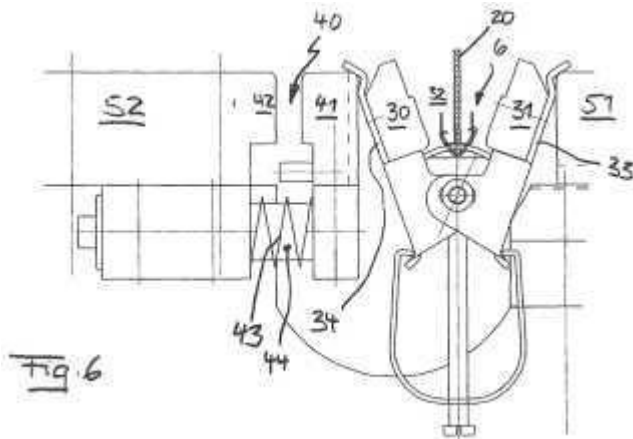


图 1 / Fig. 1

Apparatus to insert staples. Illustrative example (EP2101080):



Same subject-matter as [F16G 3/16](#)

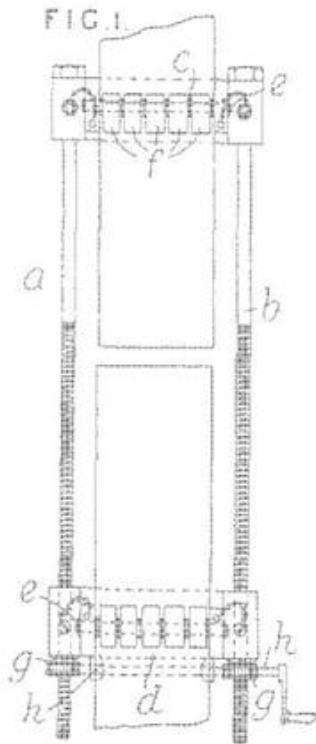
## F16G 3/006

{Traction devices to bring together belts, cables or chains}

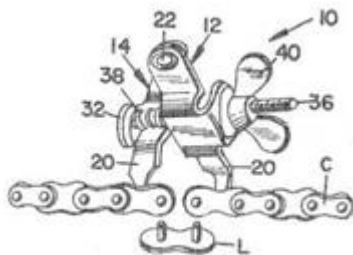
### Definition statement

*This place covers:*

Illustrative examples of subject matter classified in this group.



GB191127337



US3999738

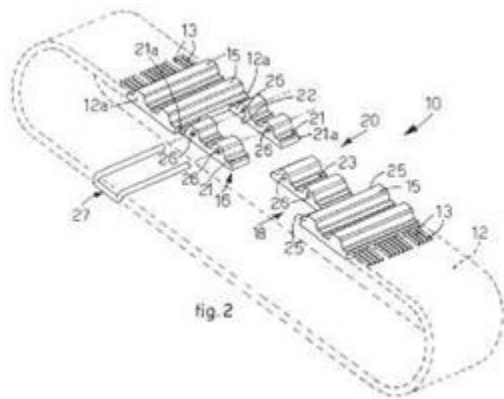
## F16G 3/02

with series of eyes or the like, interposed and linked by a pin to form a hinge  
([F16G 3/09](#) takes precedence)

### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group (EP1967758):



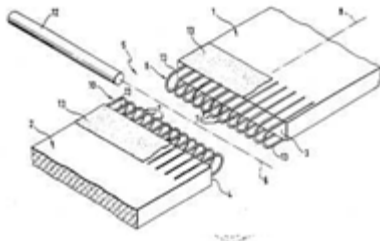
## F16G 3/04

in which the ends of separate U-shaped or like eyes are attached to the belt by parts penetrating into it

### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group (US5048675):



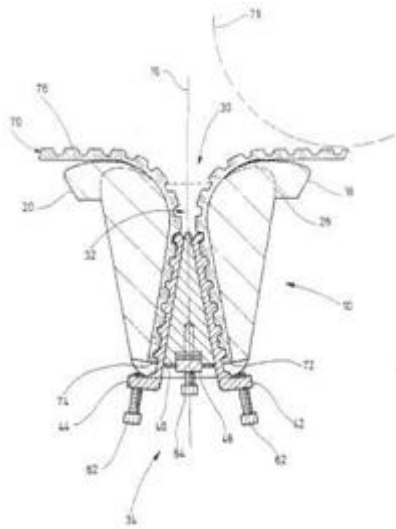
## F16G 3/06

with outwardly-bent, mutually-connected belt ends

### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group (US2008200295):



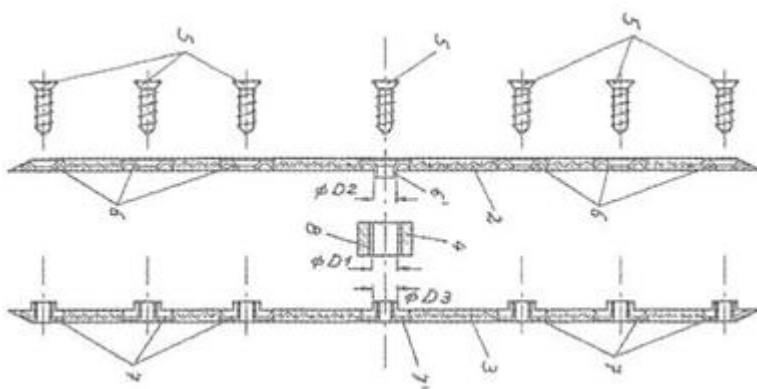
## F16G 3/08

consisting of plates and screw-bolts or rivets ([F16G 3/06](#) takes precedence)

### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group (FR2803836):



## F16G 3/10

Joining belts by sewing, sticking, vulcanising, or the like; Constructional adaptations of the belt ends for this purpose

### Definition statement

*This place covers:*

Sewing. Illustrative example (WO2005095248):

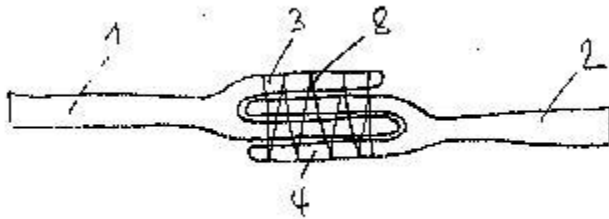
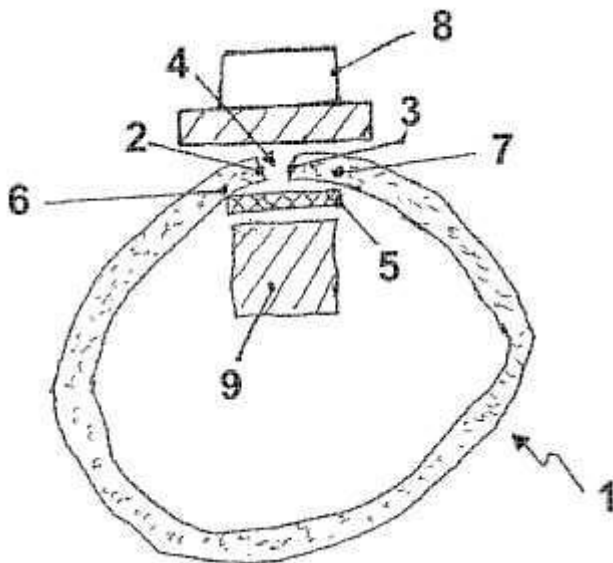
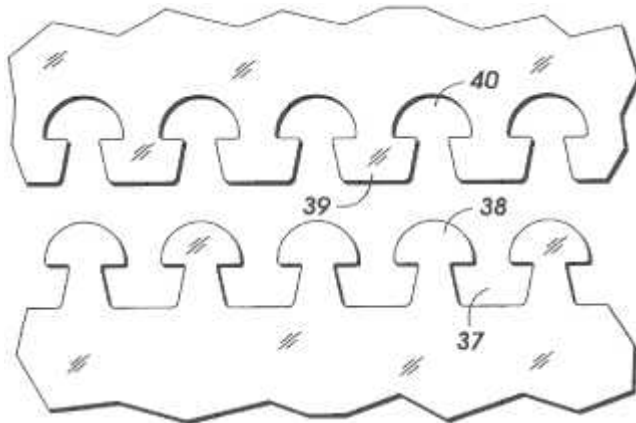


FIG. 5

Gluing. Illustrative example (DE102008019540):



Vulcanising/interlocking Illustrative example (US2002157786):



## References

### Informative references

Attention is drawn to the following places, which may be of interest for search:

Joining of plastics	<a href="#">B29C 65/00</a>
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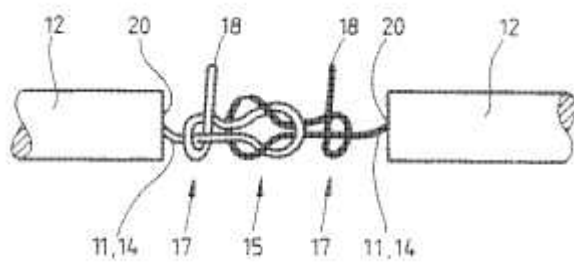
## F16G 3/12

### Joining belts by lacing

#### Definition statement

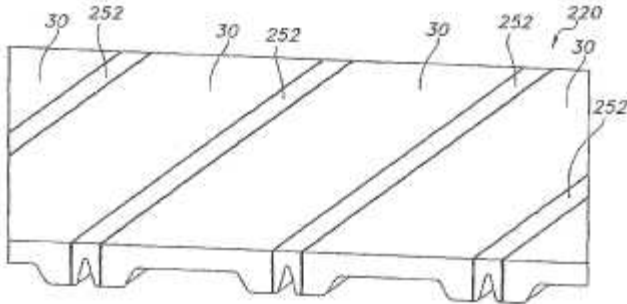
This place covers:

Illustrative example of subject matter classified in this group (DE4010795):



**F16G 3/14****with extensible parts; with resilient parts****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group (US2010025200):

**F16G 3/16****Devices or machines for connecting driving-belts or the like****Definition statement***This place covers:*

Apparatus to insert rivet. Illustrative example (WO2009106013):

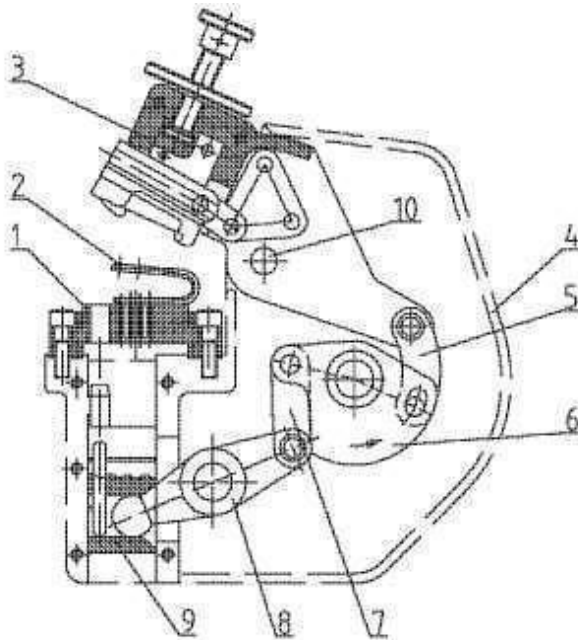
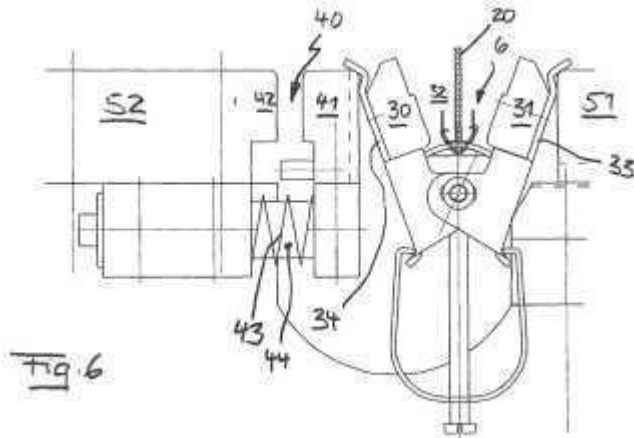


图 1 / Fig. 1

Apparatus to insert staples. Illustrative example (EP2101080):



Same subject-matter as [F16G 3/003](#)

## F16G 5/00

### V-belts, i.e. belts of tapered cross-section

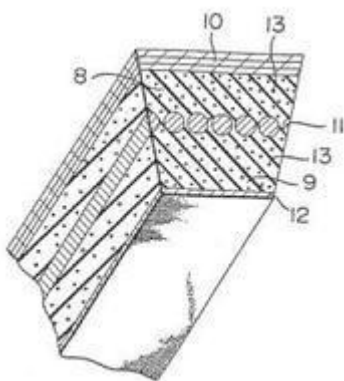
#### Definition statement

*This place covers:*

V-Belts adapted for transferring power/force from an input point to an output point to move or drive at least one mechanical part.

V-Belts being either formed into a loop that is intended to travel around an endless path and engage two or more pulleys, sprockets or similar rotating elements and transfer power/force while travelling along its path; or an elongated element that is intended to travel backward or forward along a path to transfer power/force between one point along its length to another point along its length, e.g. from a drum to a load.

Example (US 4534750):



#### References

##### Limiting references

*This place does not cover:*

Testing of belts	<a href="#">G01M 13/023</a>
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## F16G 5/04

made of rubber ([F16G 5/02](#) takes precedence {consisting of several parts [F16G 5/16](#)})

### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group (EP1894693):

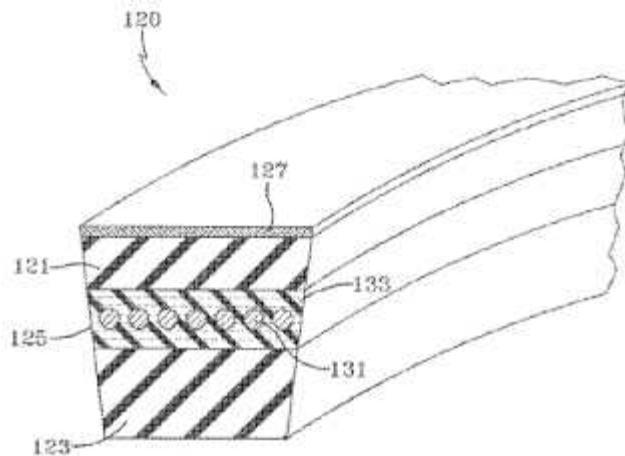


FIG-1

### Glossary of terms

*In this place, the following terms or expressions are used with the meaning indicated:*

Elastomer or Rubber	polymer containing dienes (see main groups <a href="#">C08L 7/00-C08L 21/00</a> and depending lower groups), e.g. HNBR, CR, acrylonitrile butadiene rubber ("NBR"), styrene-butadiene rubber ("SBR"), alkylated chlorosulfonated polyethylene ("ACSM"), epichlorohydrin, butadiene rubber ("BR"), natural rubber ("NR"), ethylene alpha olefin elastomers, ethylene propylene terpolymer or ethylene propylene diene terpolymer ("EPDM"), ethylene propylene copolymer ("EPM").
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## F16G 5/06

with reinforcement bonded by the rubber

### Definition statement

*This place covers:*

reinforcement both internally and externally. Illustrative example (see respectively 26 and 24 in EP1739124):

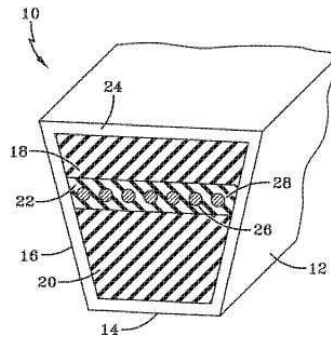


FIG-1

## F16G 5/12

made of plastics ([F16G 5/20](#) takes precedence {consisting of several parts [F16G 5/16](#)})

### Definition statement

*This place covers:*

Example of common plastics are:

Polyester (PES), Polyethylene terephthalate (PET), Polyethylene (PE), High-density polyethylene (HDPE), Polyvinyl chloride (PVC), Polyvinylidene chloride (PVDC), Low-density polyethylene (LDPE), Polypropylene (PP), Polystyrene (PS), High impact polystyrene (HIPS), Polyamides (PA) (Nylons), Acrylonitrile butadiene styrene (ABS), Polycarbonate (PC), Polycarbonate/Acrylonitrile Butadiene Styrene (PC/ABS), Polyurethanes (PU).

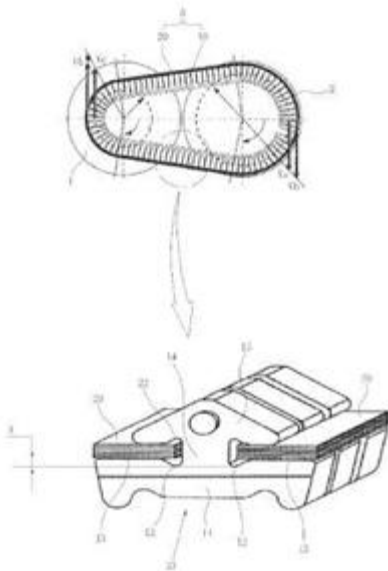
## F16G 5/16

consisting of several parts

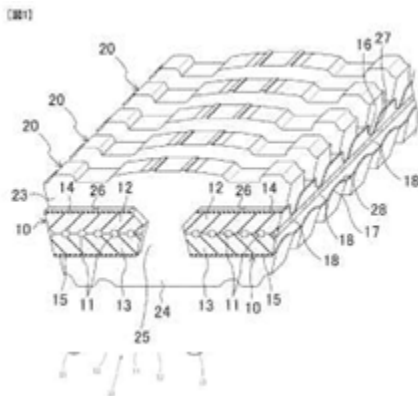
### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group (US2010144474):



and WO2010061564:



## References

### Informative references

Attention is drawn to the following places, which may be of interest for search:

Shapping by press cutting	<a href="#">B21D 28/00</a>
Making of metallic belts or rings	<a href="#">B21D 53/14</a> , <a href="#">B21D 53/16</a>
Manufacturing of metal belts	<a href="#">B23K 26/00</a>
Heat treatments for chains or chain links	<a href="#">C21D 9/0087</a>

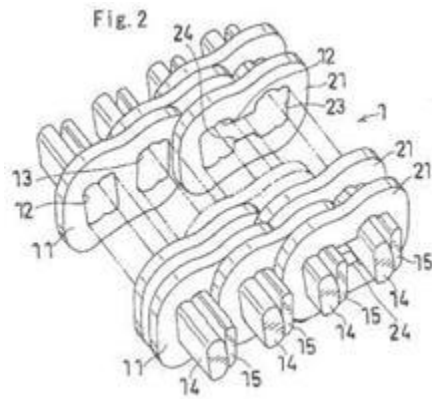
## F16G 5/18

in the form of links

### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group (EP1748221):



Although this belt looks like a chain, it is considered and classified as being a V-Belt because of the interaction of the chain with the pulley. The engagement of the pins with the pulley is made on the extremity of the pins and is similar with the side contact engagement that a V-Belt has with a pulley.

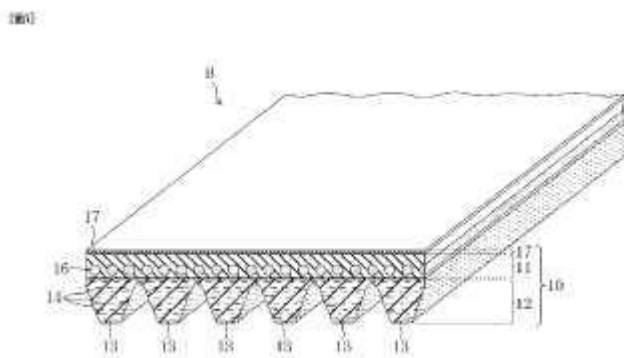
## F16G 5/20

with a contact surface of special shape, e.g. toothed

### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group (multiribbed: WO2010047051):



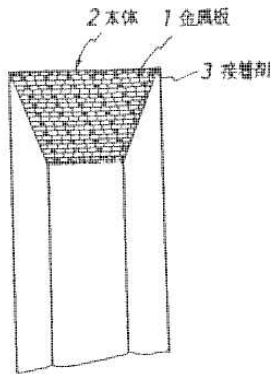
## F16G 5/22

### built-up from superimposed layers

#### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group (JP61171939):



## F16G 7/00

### V-belt fastenings

#### Definition statement

*This place covers:*

Fittings and attachments primarily intended to be connected to or used with the above types of V-belts. These include: means for fastening ends of belts together to form closed loops, e.g. fastenings for V-belts

#### References

##### *Informative references*

*Attention is drawn to the following places, which may be of interest for search:*

Producing belts of plastics	<a href="#">B29D 29/00</a>
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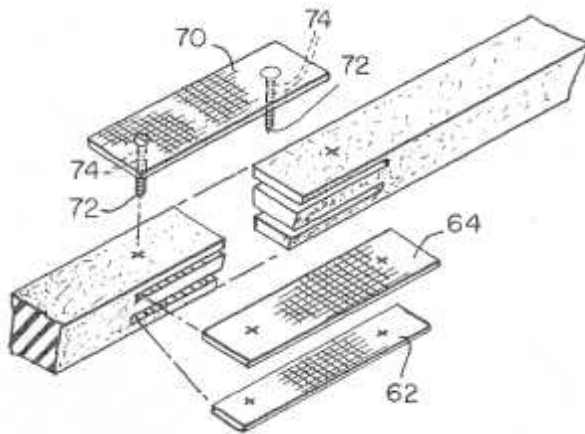
## F16G 7/02

locked, e.g. riveted

### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group (US437668):



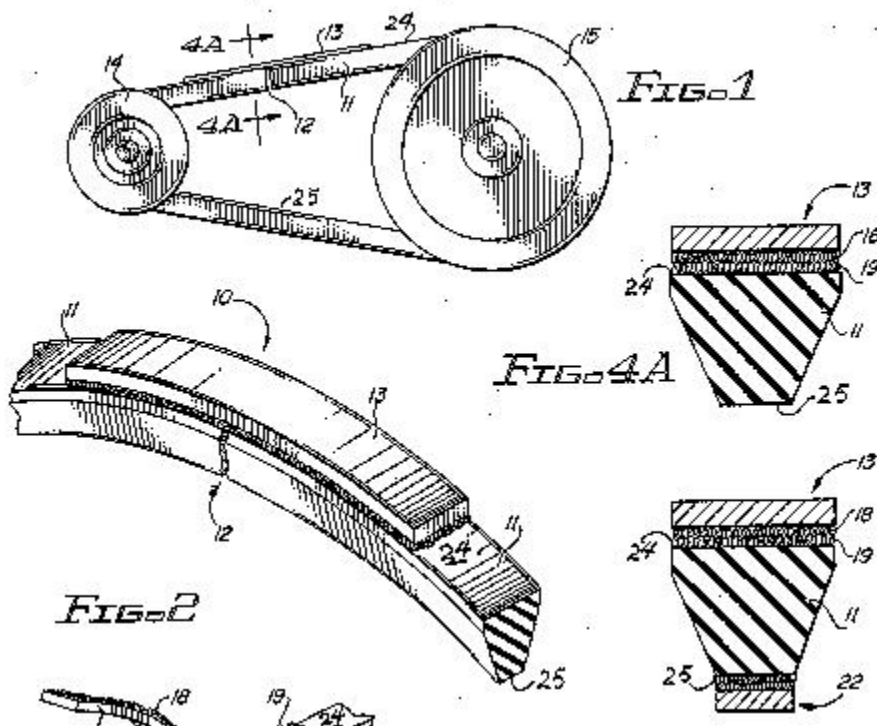
## F16G 7/04

quickly detachable

### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group (US4861322):



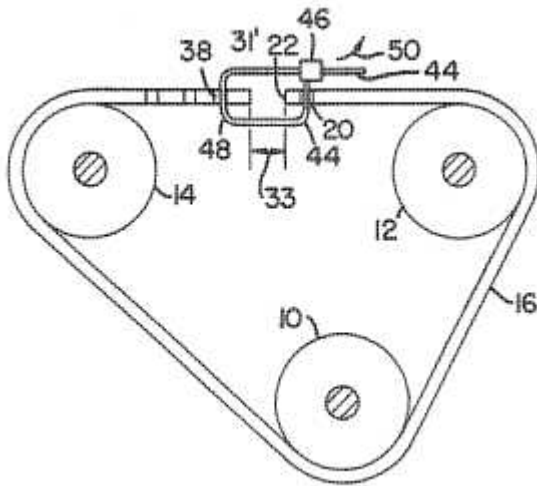
## F16G 7/06

adjustable, e.g. for tension

### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group (US4781666):



## F16G 9/00

Ropes or cables specially adapted for driving, or for being driven by, pulleys or other gearing elements (ropes or cables in general [D07B](#))

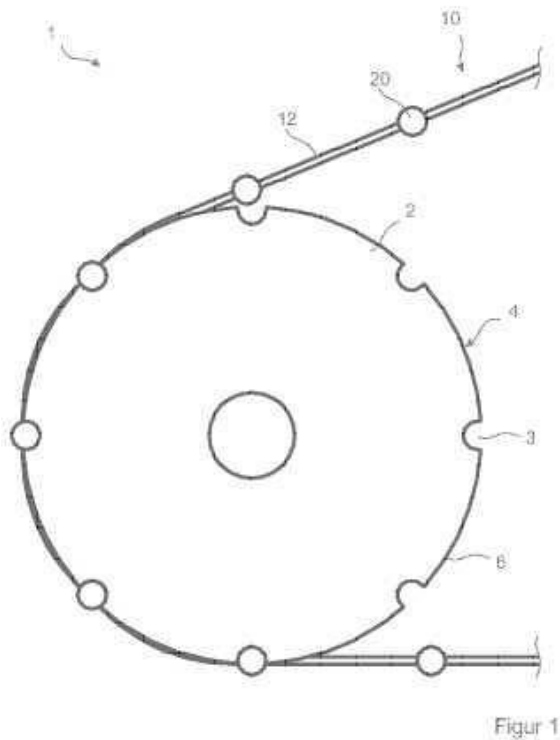
### Definition statement

*This place covers:*

Ropes or cables adapted for transferring power/force from an input point to an output point to move or drive at least one mechanical part.

Ropes or cables being either formed into a loop that is intended to travel around an endless path and engage two or more pulleys, sprockets or similar rotating elements and transfer power/force while travelling along its path; or an elongated element that is intended to travel backward or forward along a path to transfer power/force between one point along its length to another point along its length, e.g. from a drum to a load.

Example (WO2010094326):



## References

### Informative references

Attention is drawn to the following places, which may be of interest for search:

Arrangements of ropes or cables for elevators	<a href="#">B66B 7/06</a>
Slings comprising chains, wires, ropes, bands	<a href="#">B66C 1/12</a>
Ropes or cables in general	<a href="#">D07B</a>
Transmissions with cables, ropes	<a href="#">F16H 19/003</a>

## F16G 11/00

Means for fastening cables or ropes to one another or to other objects; Caps or sleeves for fixing on cables or ropes (attaching ropes or cables to lift cars or cages [B66B 7/08](#), to winch drums or barrels [B66D 1/34](#); ground anchors [E02D 5/00](#); anchoring devices for prestressed members [E04C 5/00](#); rope clamps in earth drilling [E21B 19/12](#))

### Definition statement

*This place covers:*

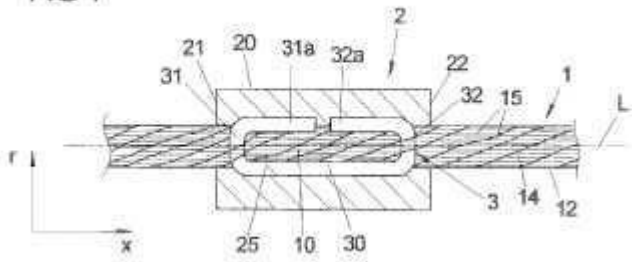
Fittings and attachments primarily intended to be connected to or used with cables or ropes.

Different sorts of assembly not covered by the subgroups.

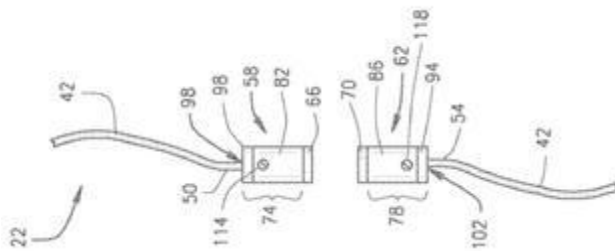


Example (EP2297419):

FIG 1



Magnets (US2011108217):



Thimble (WO2009059445):

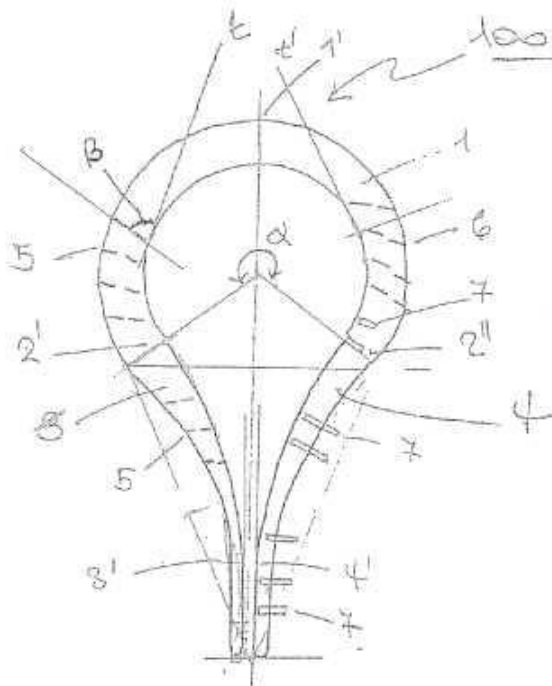


Fig. 1

**References**

**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Safety window cleaning	<a href="#">A47L 3/04</a>
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## Informative references

Safety belts or harnesses in general	<a href="#">A62B 35/00</a> , <a href="#">B63B 21/08</a>
Rope safety clamp devices	<a href="#">A62B 35/04</a> , <a href="#">A62B 1/14</a>
Safety mountainering	<a href="#">A63B 29/02</a>
Straining wire in general	<a href="#">B21F 9/00</a>
Securing of loads	<a href="#">B60P 7/06</a>
Fastening equipment for ropes on ships	<a href="#">B63B 21/04</a>
Adaptations of ropes or the like on ships	<a href="#">B63B 21/20</a>
Arrangements for ropes or cables for connection to elevator cars or cages	<a href="#">B66B 7/08</a>
Attachment of ropes or cables to drums or barrels of winding mechanisms	<a href="#">B66D 1/34</a>
Harness for animal	<a href="#">B68B</a>
Making nets	<a href="#">D04G 1/00</a>
Ropes or cables in general	<a href="#">D07B</a>
Cable clamps for suspension bridge cables	<a href="#">E01D 19/16</a>
Ground anchors	<a href="#">E02D 5/80</a>
Anchoring devices for prestressed members	<a href="#">E04C 5/00</a>
Safety in buildings	<a href="#">E04G 21/32</a>
Rope clamps in earth drilling	<a href="#">E21B 19/12</a>

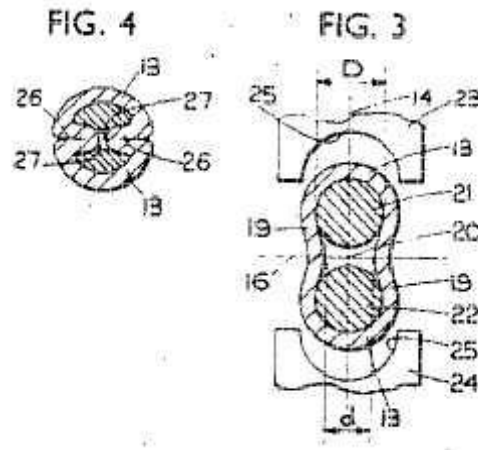
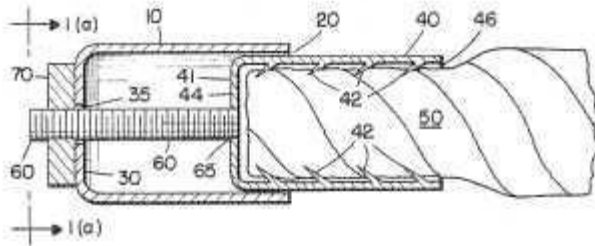
## F16G 11/02

with parts deformable to grip the cable or cables; Fastening means which engage a sleeve or the like fixed on the cable

### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group (US4939831):



Crimping of sleeves (GB1254277):

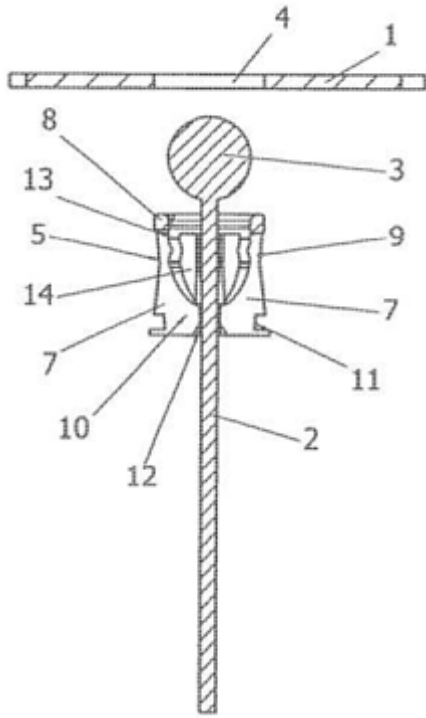
## F16G 11/03

incorporating resiliently-mounted members for attachment of the cable end

### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group (DE102009015290):



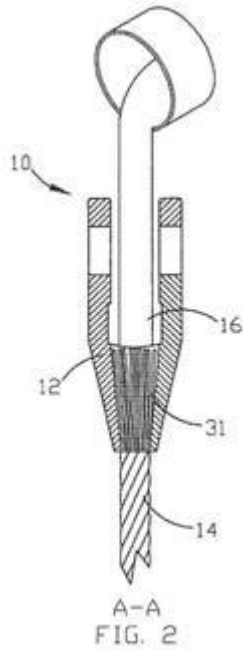
## F16G 11/04

with wedging action, e.g. friction clamps (F16G 11/02, {F16G 11/10} take precedence; {eyes for grommet-thimble type fastenings F16G 11/146})

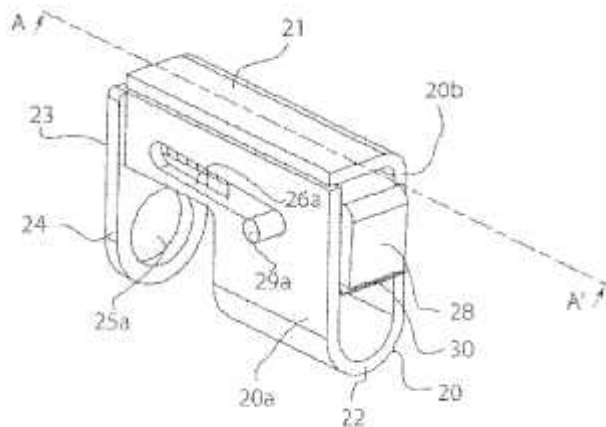
### Definition statement

*This place covers:*

Illustrative examples of subject matter classified in this group (EP2297471):



and (FR2951795):



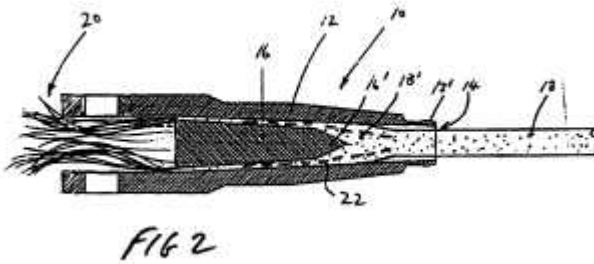
## F16G 11/05

by using conical plugs insertable between the strands

### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group (GB2313852):



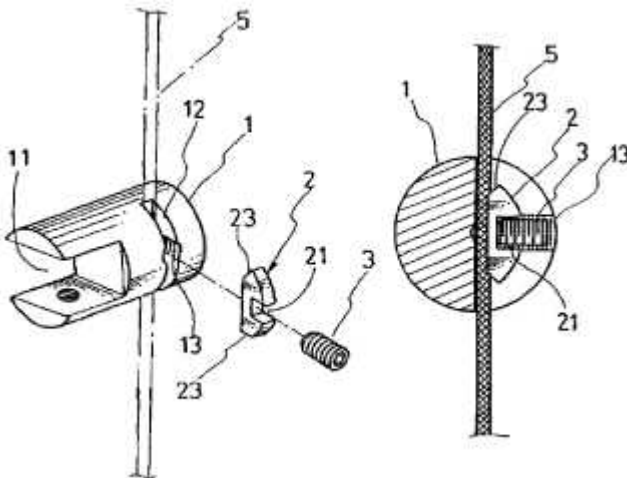
## F16G 11/06

with laterally-arranged screws ([F16G 11/02](#), [F16G 11/04](#) take precedence)

### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group (US7624479):



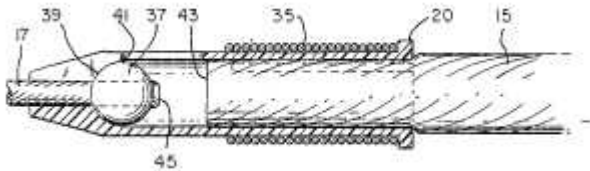
## F16G 11/08

Fastenings for securing ends of driving-cables to one another, the fastenings having approximately the same diameter as the cables

### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group (US4678360):



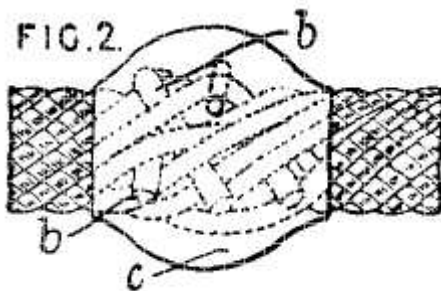
## F16G 11/09

incorporating hinge joints or pivots for the attachment of the cable ends

### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group (GB191007934):



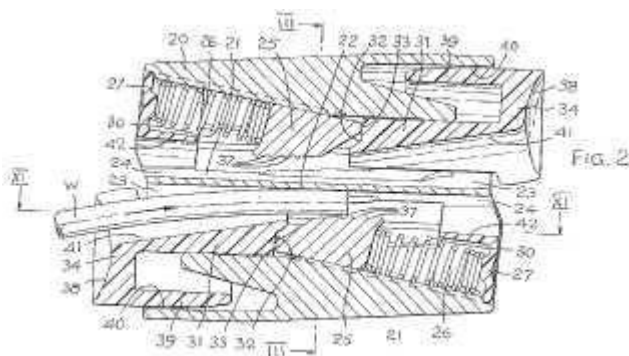
## F16G 11/10

Quick-acting fastenings; Clamps holding in one direction only

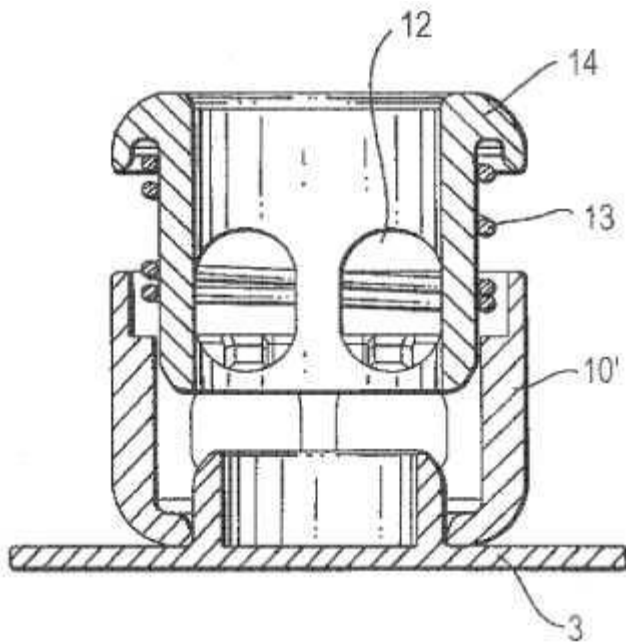
### Definition statement

*This place covers:*

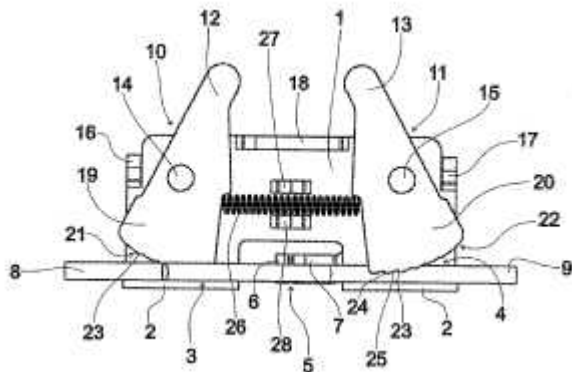
Illustrative examples of subject matter classified in this group (WO2009112806):



(US2009064473):



(WO2006105866):



## References

### Informative references

Attention is drawn to the following places, which may be of interest for search:

Holding devices for laces	<a href="#">A43C 7/00</a> , <a href="#">A43C 1/06</a>
Clamps for straps like e.g. for safety belts	<a href="#">A44B 11/06</a>
Safety window cleaning	<a href="#">A47L 3/04</a>
Rope safety clamp devices	<a href="#">A62B 35/04</a> , <a href="#">A62B 1/14</a>
Safety mountainering	<a href="#">A63B 29/02</a>
Rope cleat	<a href="#">B63B 21/08</a>
Safety in buildings	<a href="#">E04G 21/32</a>



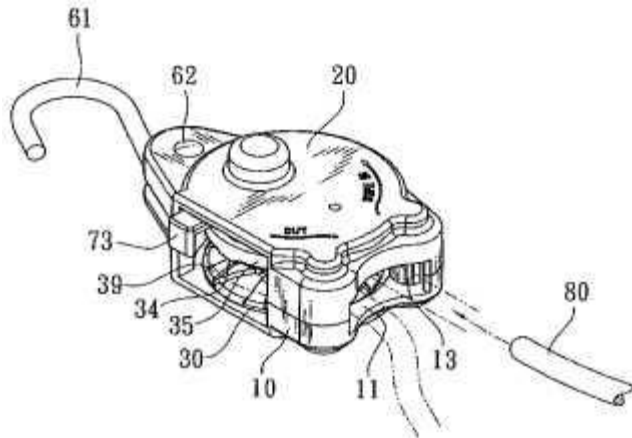
## F16G 11/12

Connections or attachments, e.g. turnbuckles, adapted for straining of cables, ropes, or wire (straining wire in general [B21F 9/00](#))

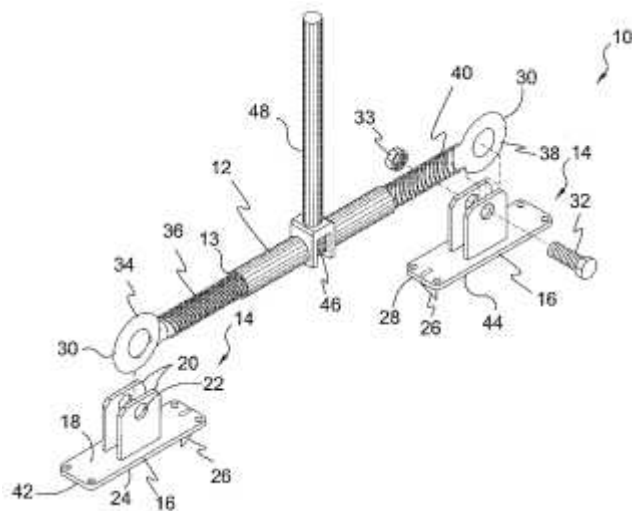
### Definition statement

*This place covers:*

Illustrative examples of subject matter classified in this group (US2010275417):



and (US7451962):



## References

### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Clamps for straps like e.g. for safety belts	<a href="#">A44B 11/06</a>
Fastening/connecting/tensioning	<a href="#">B25B 25/00</a>
Securing of loads	<a href="#">B60P 7/06</a>
Tighteners	<a href="#">B60P 7/0823</a>
Bundling using buckles	<a href="#">B65D 63/16</a>

### Special rules of classification

This group applies only for cables ropes or wires and not for belts

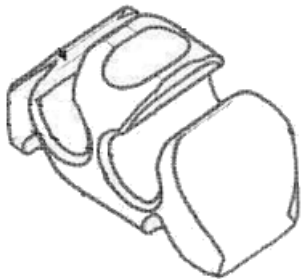
### F16G 11/14

**Devices or coupling-pieces designed for easy formation of adjustable loops, e.g. choker hooks; Hooks or eyes with integral parts designed to facilitate quick attachment to cables or ropes at any point, e.g. by forming loops**

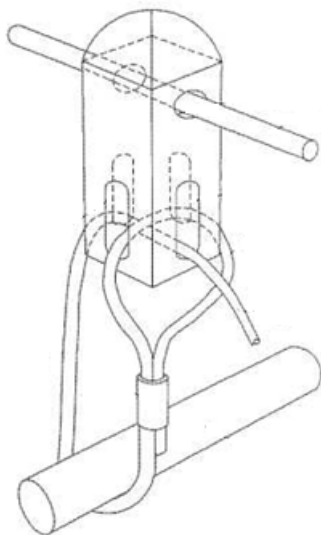
### Definition statement

*This place covers:*

Illustrative examples of subject matter classified in this group:



and (US5950284):



### References

#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

Safety belts or harnesses in general	<a href="#">A62B 35/00</a>
Safety mountainering	<a href="#">A63B 29/02</a>
Fastening of Ropes	<a href="#">B63B 21/04</a>

Chokers	<a href="#">B66C 1/14</a>
Crane hooks	<a href="#">B66C 1/34</a>
Hooks or eyes in general	<a href="#">F16B 45/00</a>

## **F16G 13/00**

### **Chains (making thereof [B21L](#))**

#### **References**

##### **Limiting references**

*This place does not cover:*

Methods or apparatus for making or permanently assembling chains or chain elements	<a href="#">B21L</a> , <a href="#">B22D 25/02</a> , <a href="#">B29C</a>
Gearings using endless flexible members	<a href="#">F16H 7/00</a> , <a href="#">F16H 9/00</a>
Chains specially adapted for gearings with variable ratio by using endless flexible members	<a href="#">F16H 9/24</a>

##### **Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

Making of chains by mechanical metal-working without essentially removing material or by punching metal	<a href="#">B21L</a>
Making of chains by casting	<a href="#">B22D 25/02</a>
Making of chains by shaping or joining of plastics or by shaping of substances in a plastic state, in general	<a href="#">B29C</a> , <a href="#">B29L 2031/12</a>
Traction chains for conveyors	<a href="#">B65G 17/38</a> , <a href="#">B65G 19/20</a>
Heat treatments for chains or chain links	<a href="#">C21D 9/0087</a>

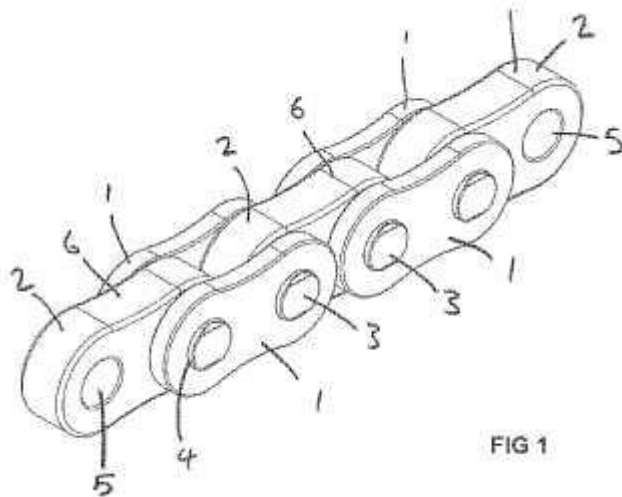
## F16G 13/02

### Driving-chains (specially adapted to gearings with variable gear-ratio F16H 9/00)

#### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group (EP2258653):



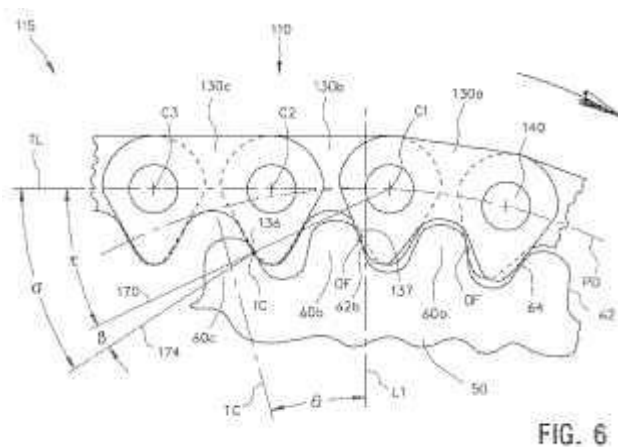
## F16G 13/04

### Toothed chains

#### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group (WO2010030669):





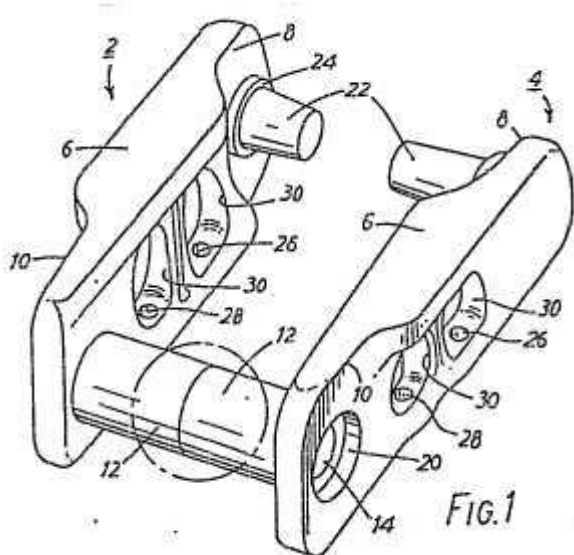
## F16G 13/07

the links being of identical shape, e.g. cranked

### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group (US 4553791):



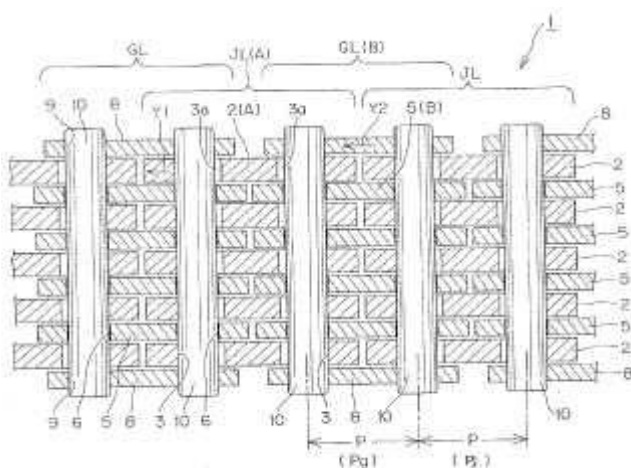
## F16G 13/08

with links closely interposed on the joint pins ([F16G 13/04](#) takes precedence)

### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group (US2010069188):



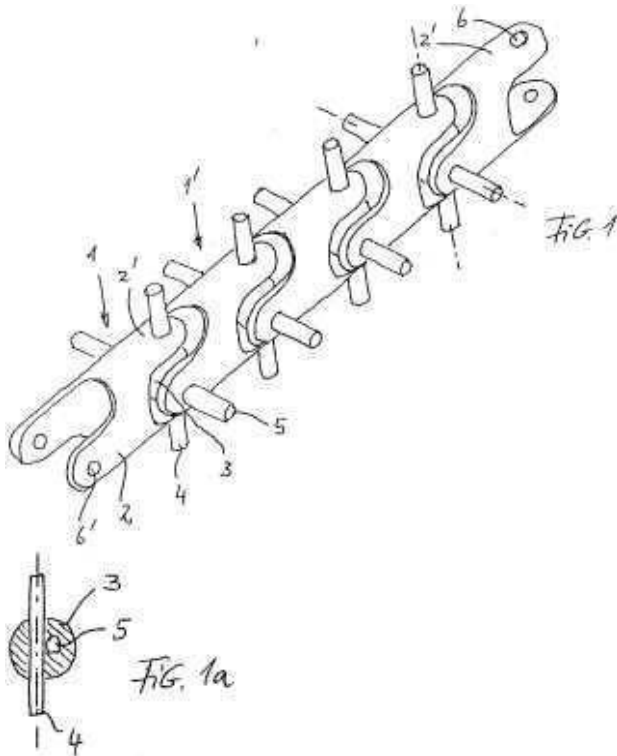
## F16G 13/10

with universal joints

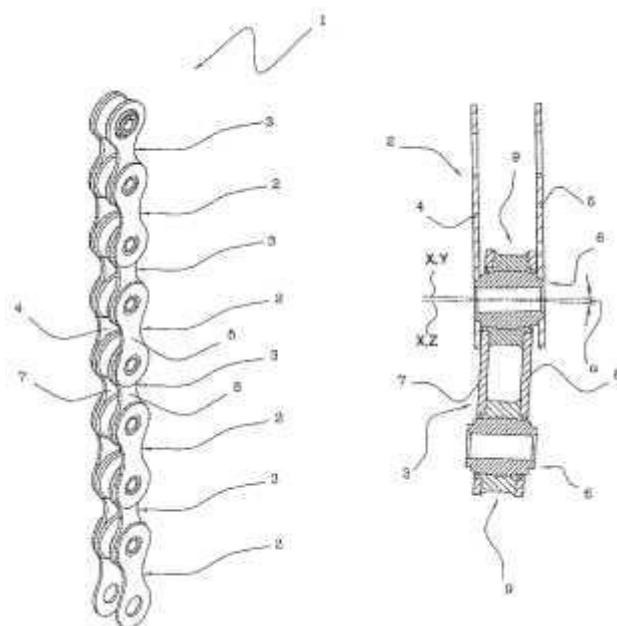
### Definition statement

*This place covers:*

Illustrative examples of subject matter classified in this group (EP1235000):



and (WO03091599):



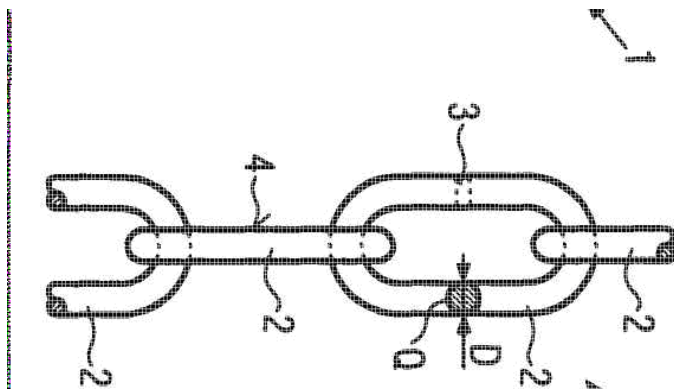
## F16G 13/12

Hauling- or hoisting-chains {so called ornamental chains}

### Definition statement

*This place covers:*

Illustrative examples of subject matter classified in this group (WO2007009517):



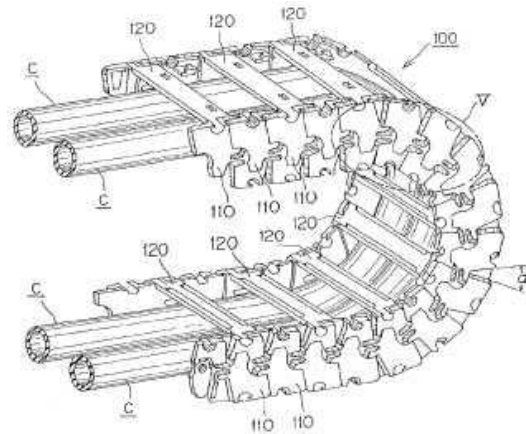
## F16G 13/16

with arrangements for holding electric cables, hoses, or the like

### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group (US2008120958):



## References

### Informative references

Attention is drawn to the following places, which may be of interest for search:

Protective arrangements for electric wires in vehicles	<a href="#">B60R 16/0215</a>
Means for guiding or supporting belts	<a href="#">F16H 7/18</a>
Protective tubings or conduits for electric cables made of articulated units	<a href="#">H02G 3/0475</a>
Arrangements of electric cables using an extensible carrier	<a href="#">H02G 11/006</a>



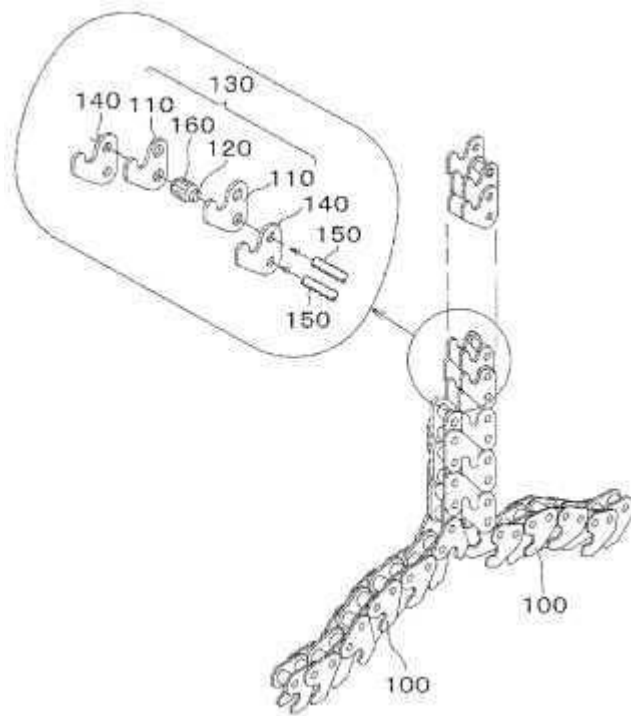
## F16G 13/18

### Chains having special overall characteristics

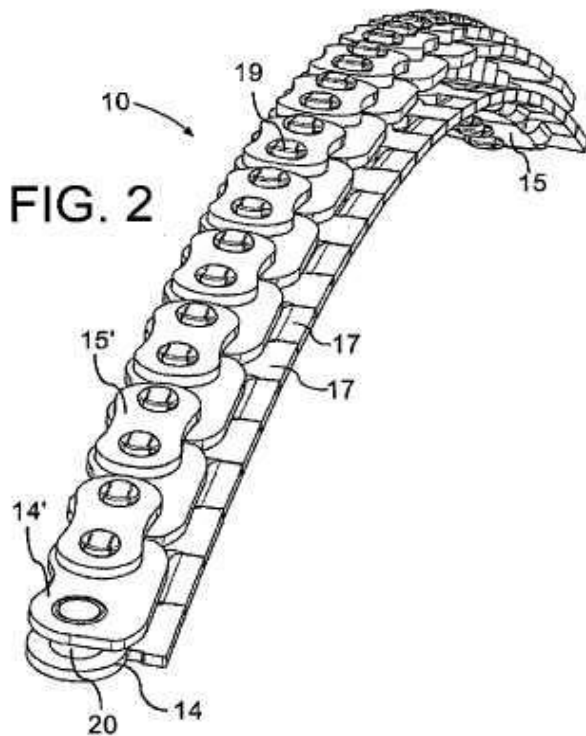
#### Definition statement

*This place covers:*

Push pull chains. Illustrative examples (US2010223901):



and (EP2146033):



and other special characteristics of chains.

## References

### Informative references

Attention is drawn to the following places, which may be of interest for search:

Conveyor with chains or like traction elements	<a href="#">B65G 17/38</a>
Jacks for lifting loads	<a href="#">B66F 3/06</a>
Thrust chain devices	<a href="#">B66F 13/005</a>
Push pull chains for wings	<a href="#">E05F 11/04</a> , <a href="#">E05F 15/619</a>

## F16G 15/00

**Chain couplings, Shackles; Chain joints; Chain links; Chain bushes (making chain elements [B21L](#))**

### Definition statement

*This place covers:*

means for coupling chains; components of chains, e.g. shackles, swivels, chain joints, chain links or chain bushes;

## References

### Informative references

Attention is drawn to the following places, which may be of interest for search:

Fastening equipment for chains on ships	<a href="#">B63B 21/04</a>
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Adaptations of chains or the like on ships

[B63B 21/20](#)

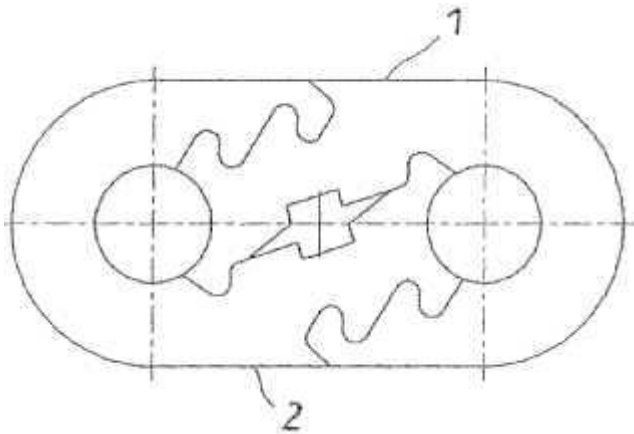
## F16G 15/02

for fastening more or less permanently

### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group (DE10119307):



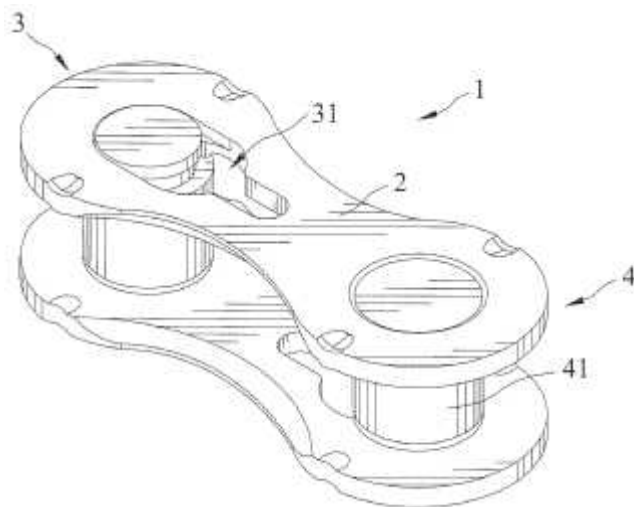
## F16G 15/04

Quickly-detachable chain couplings; Shackles {chain links with rapid junction means are classified according to the corresponding kind of chain}

### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group (US2011028255):



## References

### Informative references

Attention is drawn to the following places, which may be of interest for search:

Hooks for sailing purpose	<a href="#">B63H 9/08</a>
Snaphook	<a href="#">F16B 45/00</a>
Hooks	<a href="#">F16B 45/00</a>
Hooks with pivoting closing member	<a href="#">F16B 45/02</a>
Hooks with sliding closing member	<a href="#">F16B 45/04</a>

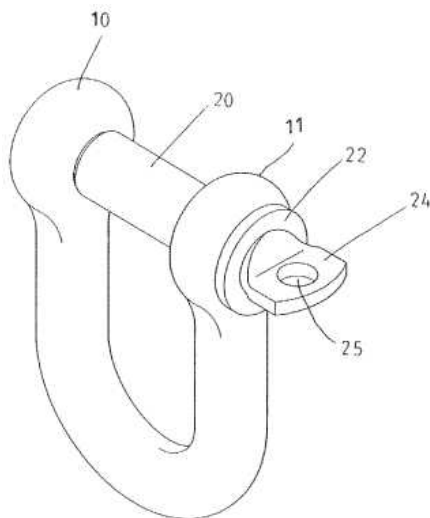
## F16G 15/06

Shackles designed for attachment by joint pins to chain elements, e.g. D-shackles {so called harp links; the D-chain links are classified according to the corresponding kind of chain}

### Definition statement

This place covers:

Illustrative example of subject matter classified in this group (US2004075287):



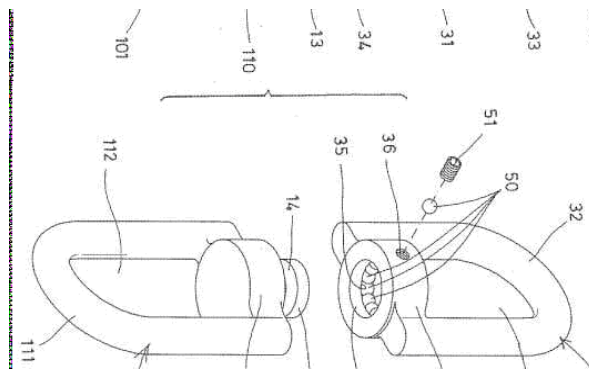
## F16G 15/08

### Swivels

#### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group (US2009208274):



#### References

##### Informative references

Attention is drawn to the following places, which may be of interest for search:

Swivels for fishing purpose	<a href="#">A01K 91/04</a>
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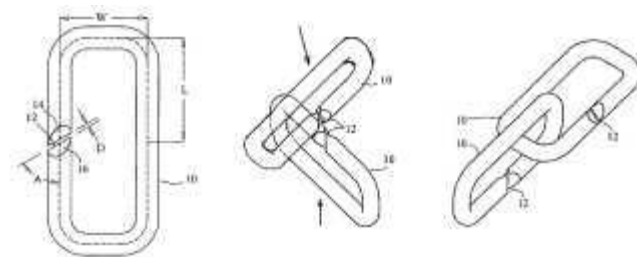
## F16G 15/12

### Chain links

#### Definition statement

*This place covers:*

Illustrative example of subject matter classified in this group (US7032372):

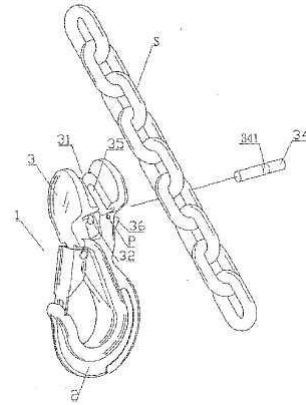


## F16G 17/00

Hooks as integral parts of chains (hooks for cranes [B66C 1/34](#); hooks in general [F16B 45/00](#))

### Definition statement

*This place covers:*



Hooks as integral parts of chains. Illustrative example (FR2855580):

### References

#### Limiting references

*This place does not cover:*

Hooks for cranes	<a href="#">B66C 1/34</a>
Hooks or eyes in general	<a href="#">F16B 45/00</a>