

B21L

MAKING CHAINS (making chains or chain links by casting B22D25/02; chains in general F16G)

Definition statement

This subclass/group covers:

Methods and devices for making metal chains essentially by metal forming operations (e.g. bending, cutting, assembling), eventually by welding.

References relevant to classification in this subclass

This subclass/group does not cover:

Making chains or chain links by casting	B22D 25/02
Forging members of endless tracks	B21K 23/02

Informative references

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

Chains in general	F16G
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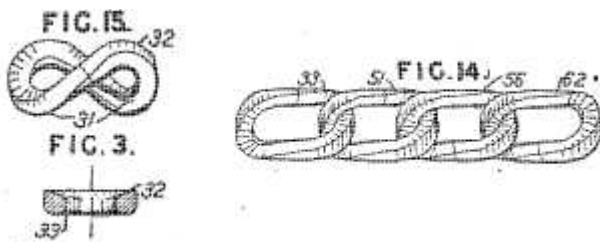
B21L 1/00

Making chains or chain links by bending work-pieces of rod, wire, or strip to form links of oval or other simple shape (B21L3/00, B21L7/00 take precedence)

Definition statement

This subclass/group covers:

Methods and devices for making chains or chain links by bending work-pieces of rod, wire or strip to form links of oval or other simple shape.



Source: GB644151

References relevant to classification in this group

This subclass/group does not cover:

Making chains or chain links by bending and subsequently welding or soldering the abutting ends.	B21L 3/00
Making chains or chain links by bending into a coil and cutting single loops or loop parts from said coil	B21L 7/00

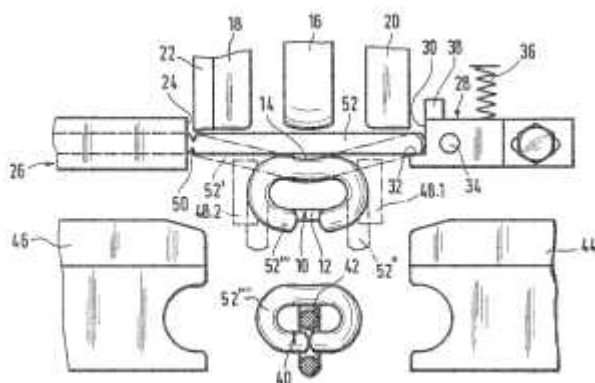
B21L 1/02

by bending the ends of the workpieces to abut

Definition statement

This subclass/group covers:

Methods and devices for making chains or chain links by bending the ends of workpieces to abut.



Source: US4694644

B21L 1/04

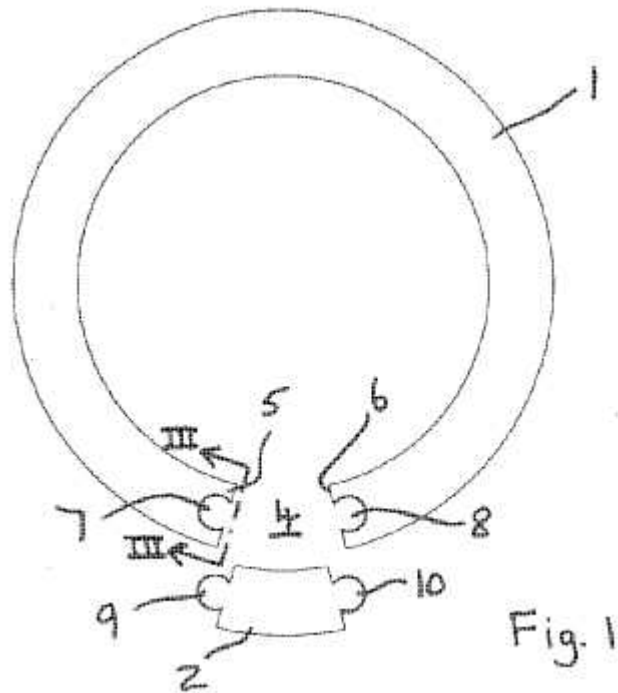
by bending and interconnecting the ends of the workpieces with or without separate jointing members

Definition statement

This subclass/group covers:

Methods and devices for making chains or chain links by bending and

interconnecting the ends of workpieces with or without separate jointing members.



Source: GB2324163

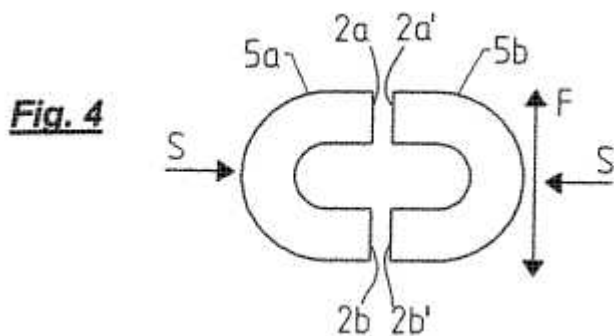
B21L 3/00

Making chains or chain links by bending the chain links or link parts and subsequently welding or soldering the abutting ends (B21L7/00 takes precedence)

Definition statement

This subclass/group covers:

Methods and devices for making chains or chain links by bending the chain links or link parts and subsequently welding or soldering the abutting ends.



Source: EP2219803

References relevant to classification in this group

This subclass/group does not cover:

Making chains or chain links by bending into a coil and cutting single loops or loop parts from coil and subsequently welding

[B21L 7/00](#)

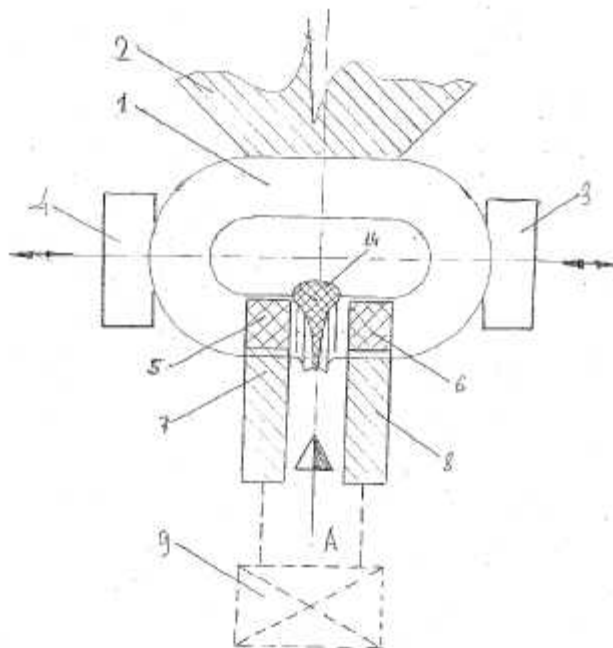
B21L 3/02

Machines or devices for welding chain links

Definition statement

This subclass/group covers:

Methods and devices for welding chain links.



Source: DE10331400

B21L 3/04

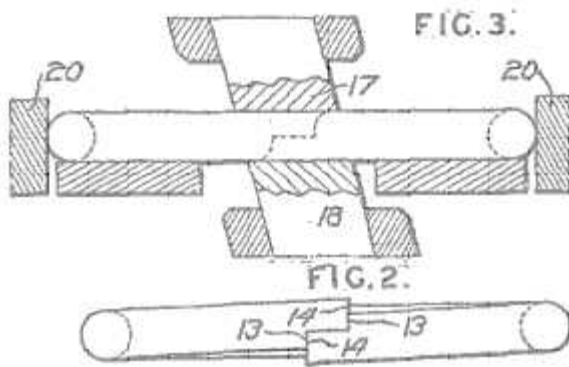
by making use of forge or pressure welding

Definition statement

This subclass/group covers:

Methods and devices for welding chain links by making use of forge or

pressure welding.



Source: GB689391

B21L 5/00

Making chains or chain links by working the starting material in such a way that integral, i.e. jointless, chains links are formed

Definition statement

This subclass/group covers:

Methods and devices for making chains or chain links by working the starting material in such a way that integral, i.e. jointless, chains links are formed.

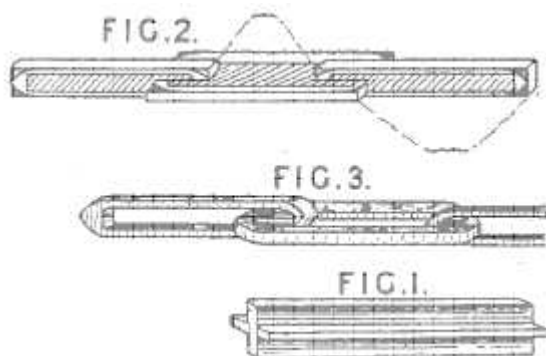
B21L 5/02

in such a way that interconnected links are formed

Definition statement

This subclass/group covers:

Methods and devices for making chains or chain links by working the starting material in such a way that integral, i.e. jointless, chains links are formed in an interconnected manner.



Source: GB361952

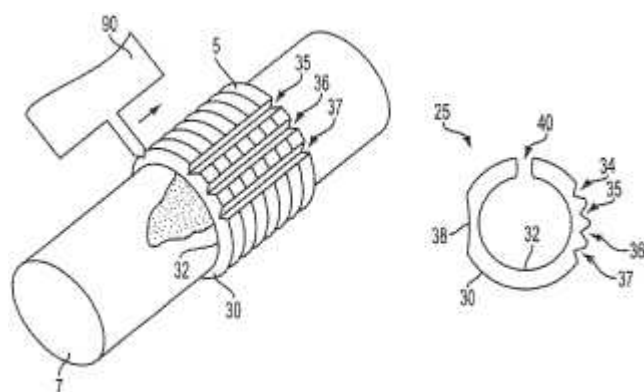
B21L 7/00

Making chains or chain links by cutting single loops or loop-parts from coils, assembling the cut parts and subsequently subjecting same to twisting with or without welding

Definition statement

This subclass/group covers:

Methods and devices for making chains or chain links by cutting single loops or loop-parts from coils, assembling the cut parts and subsequently subjecting same to twisting with or without welding.



Source: US6389790

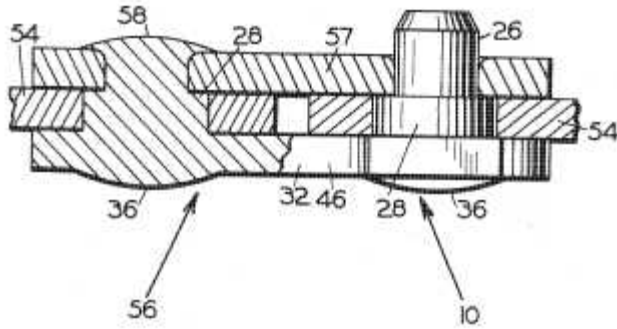
B21L 9/00

Making chains or chain links, the links being composed of two or more different parts, e.g. drive chains (B21L1/04, B21L7/00, B21L11/14, B21L13/00 take precedence)

Definition statement

This subclass/group covers:

Methods and devices for making chains or chain links, the links being composed of two or more different parts, e.g. drive chains.



Source: US4118995

Informative references

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

Endless traction elements in conveyors	B65G 17/08
Load carrier chains	B65G 14/40
Making chains or chain links by bending work-pieces and interconnecting the ends.	B21L 1/04
Making chains or chain links by bending and cutting single loops or loop parts from coils.	B21L 7/00
Making chains or chain links with inserted or integrally formed studs	B21L 11/14
Making terminal or intermediate chain links of special shapes.	B21L 13/00

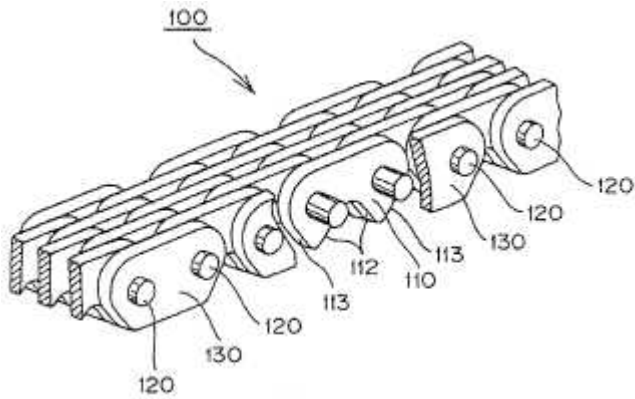
B21L 9/02

of roller-chain or other plate-link type

Definition statement

This subclass/group covers:

Methods and devices for making roller-chains or other plate-link type chains.



Source. US2007032325

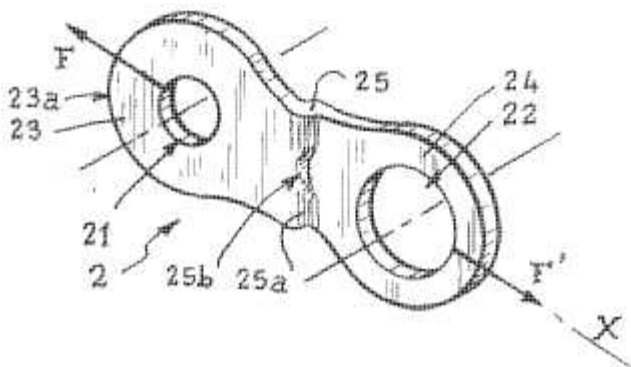
B21L 9/04

Punching or bending the different parts of the chain links

Definition statement

This subclass/group covers:

Methods and devices for punching or bending the different parts of the chain links.



Source: FR2795474

Informative references

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

Making belts from metal sheet	B21D 53/14
Forging members of endless tracks	B21K 23/02

B21L 9/06

Sorting, feeding, assembling, riveting, or finishing parts of chains

Definition statement

This subclass/group covers:

Methods and devices for sorting, feeding, assembling, riveting, or finishing parts of chains of the type being composed of two or more different parts.

FIG. 1(a)

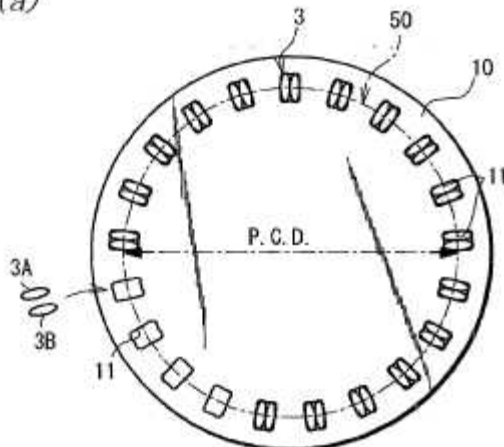
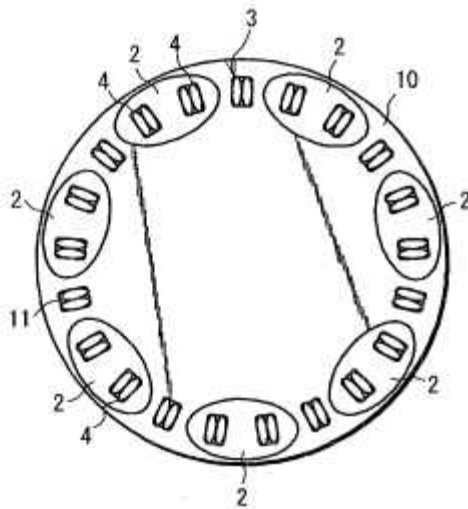


FIG. 1(b)



Source: EP1803511

B21L 9/065

[N: Assembling or disassembling]

Definition statement

This subclass/group covers:

Methods and devices for assembling or disassembling parts of chains of the type being composed of two or more different parts.

Source: US6068568

B21L 11/00

Making chains or chain links of special shape

Definition statement

This subclass/group covers:

Methods and devices for making chains or chain links of special shape.

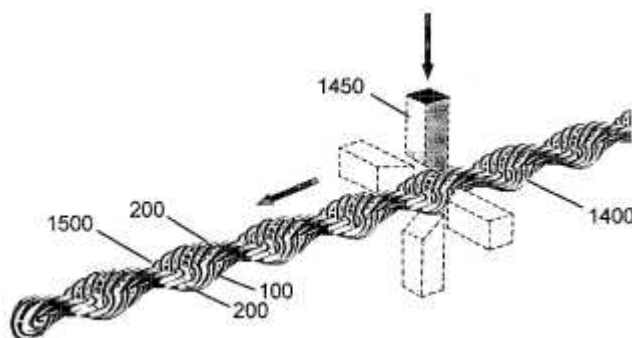
B21L 11/005

[N: Making ornamental chains (B21L11/02 to B21L11/14 take precedence; ornamental chains A44C)]

Definition statement

This subclass/group covers:

Methods and devices for making ornamental chains.



Source: US20090241598

References relevant to classification in this group

This subclass/group does not cover:

Making chains or chain links by bending the ends of work-pieces to abut	B21L 11/02
Making chains or chain links with inserted or integrally formed studs	B21L 11/14

Informative references

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

Ornamental chains	A44C
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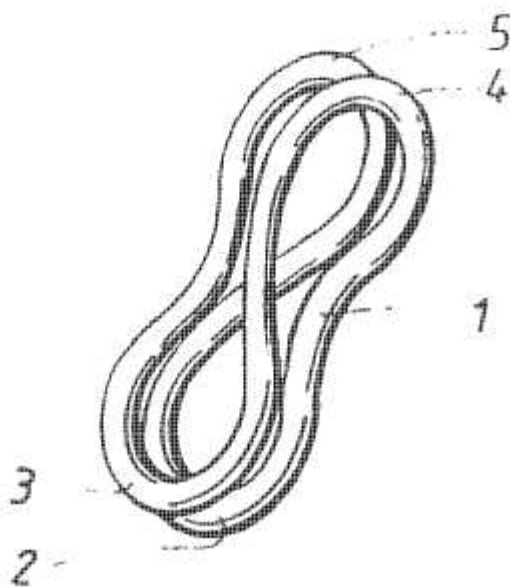
B21L 11/02

each link being formed of a single member of which both ends are bent or shaped to engage the middle portions of the next link

Definition statement

This subclass/group covers:

Methods and devices for making chains or chain links, wherein each link is formed of a single member of which both ends are bent or shaped to engage the middle portions of the next link.



Source: EP0774086

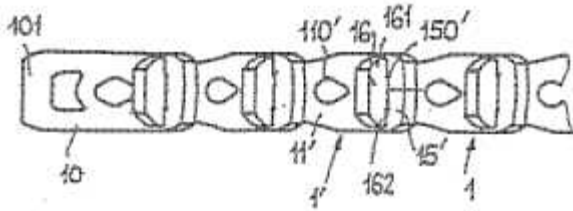
B21L 11/04

the ends being pierced or punched to form eyes

Definition statement

This subclass/group covers:

Methods and devices for making chains or chain links, wherein the ends of the links are pierced or punched to form eyes.



Source: DE19715707

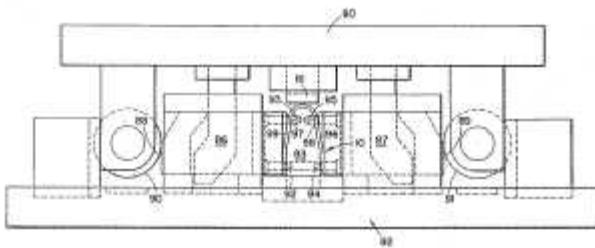
B21L 11/06

the workpiece being of thin strip metal

Definition statement

This subclass/group covers:

Methods and devices for making chains or chain links starting from a thin strip of metal.



Source: US3869856

Informative references

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

Making belts from metal sheet	B21D 53/14
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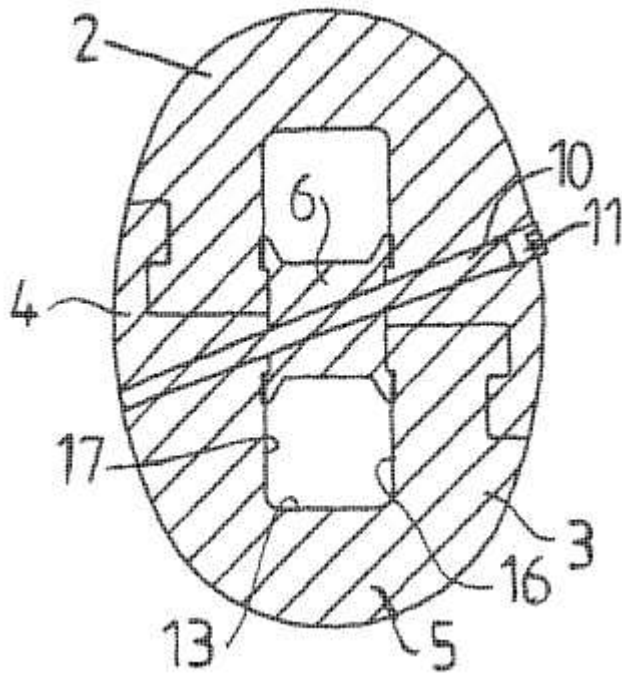
B21L 11/08

the ends being interengaged with other parts of the same link

Definition statement

This subclass/group covers:

Methods and devices for making chains or chain links, wherein ends are interengaged with other parts of the same link.



Source: WO0246613

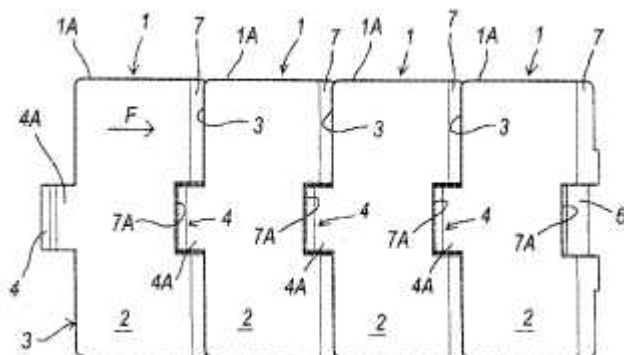
B21L 11/10

the chain links having opposed correspondingly shaped cylindrical and hook-like parts of which one parts forms a hinge-like support for the adjacent link (B21L11/02 takes precedence)

Definition statement

This subclass/group covers:

Methods and devices for making chains or chain links wherein the chain links have opposed correspondingly shaped cylindrical and hook-like parts of which one parts forms a hinge-like support for the adjacent link.



Source: WO2007017107

References relevant to classification in this group

This subclass/group does not cover:

Making chains or chain links, wherein each link engages the middle portion of the next link.	B21L 11/02
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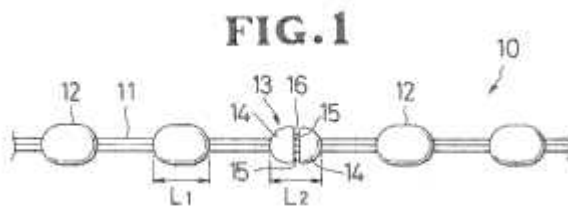
B21L 11/12

forming bead chains

Definition statement

This subclass/group covers:

Methods and devices for making bead chains.



Source: EP0565379

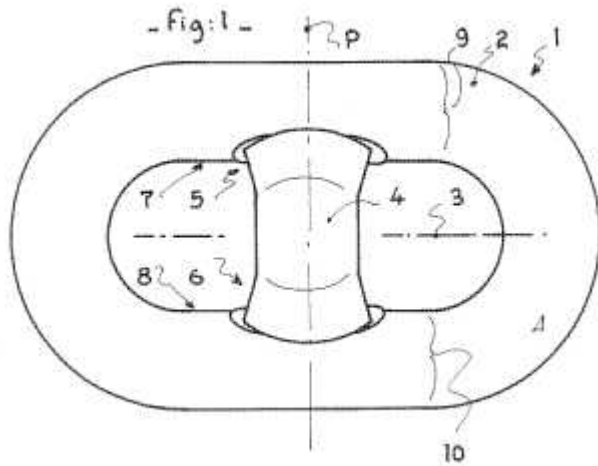
B21L 11/14

making chain links with inserted or integrally-formed studs

Definition statement

This subclass/group covers:

Methods and devices for making links with inserted or integrally-formed studs.



Source: EP0736348

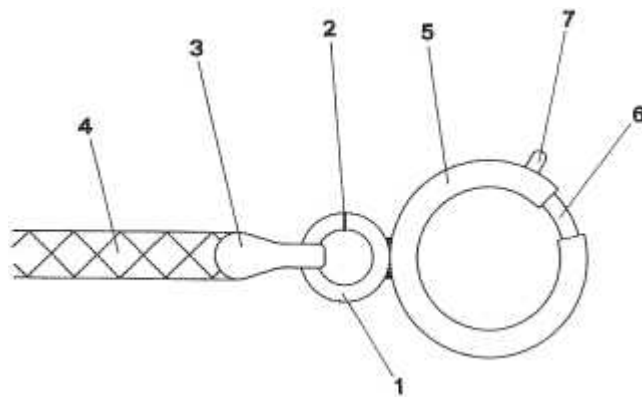
B21L 13/00

Making terminal or intermediate chain links of special shape; making couplings for chains, e.g. swivels, shackles

Definition statement

This subclass/group covers:

Methods and devices for making terminal or intermediate chain links of special shape or making couplings for chains, e.g. swivels, shackles.



Source: US6230961

B21L 15/00

Finishing or dressing chains or chain links, e.g. removing burr material, calibrating (B21L9/06 takes precedence)

Definition statement

This subclass/group covers:

Methods and devices for finishing (e.g. pre-stressing) or dressing chains or chain links, e.g. removing burr material, calibrating.

FIG. 1

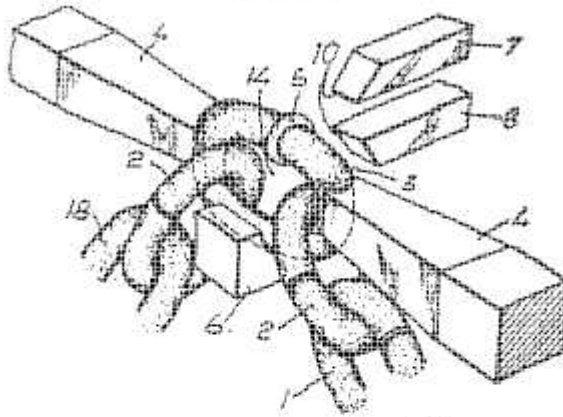


FIG. 4

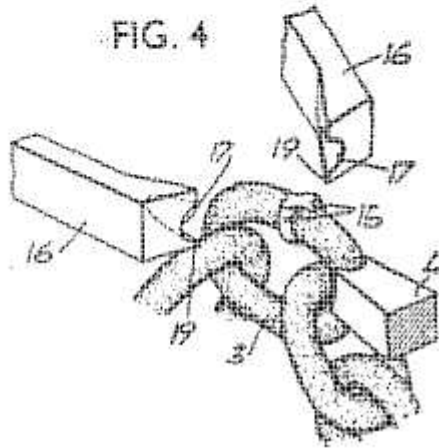
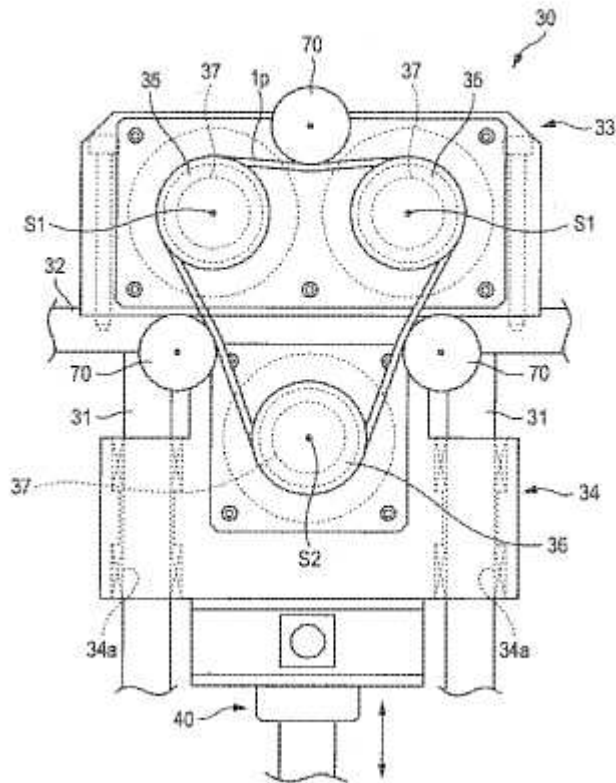


FIG. 6



Source: GB1130249; EP1938916

Informative references

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

Heat treatments for chain links	C21D 9/0087
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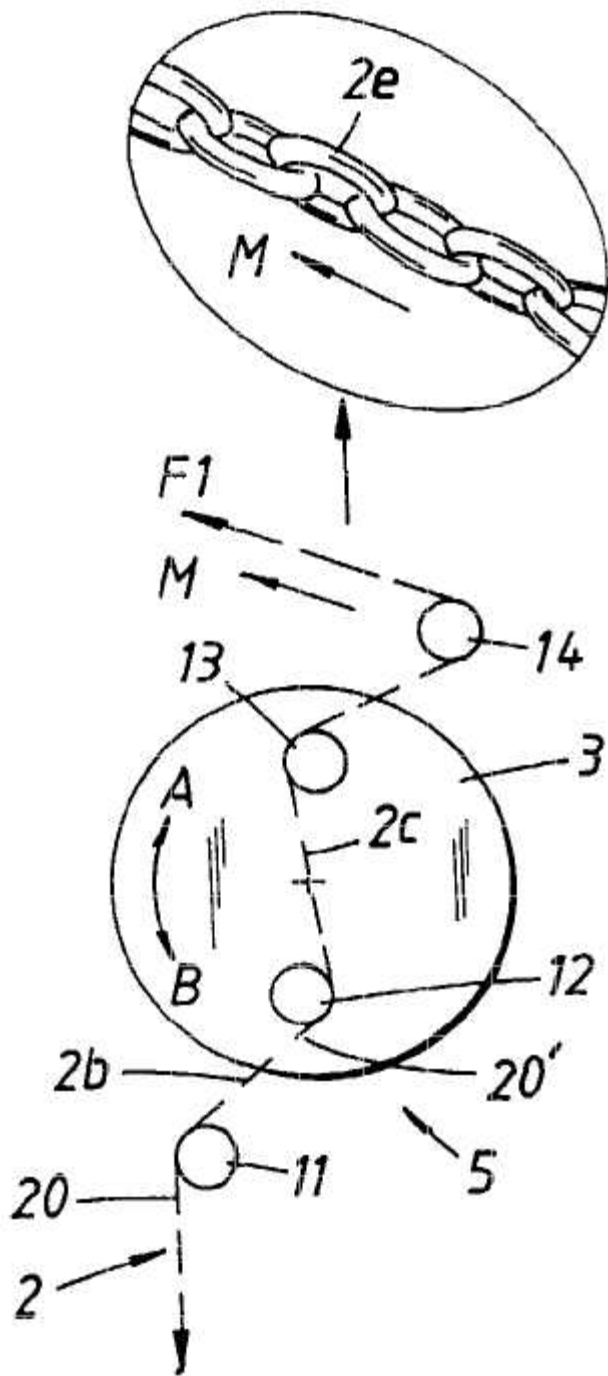
B21L 15/02

Twisting already closed links

Definition statement

This subclass/group covers:

Methods and devices for twisting already closed links.



Source: WO0228567

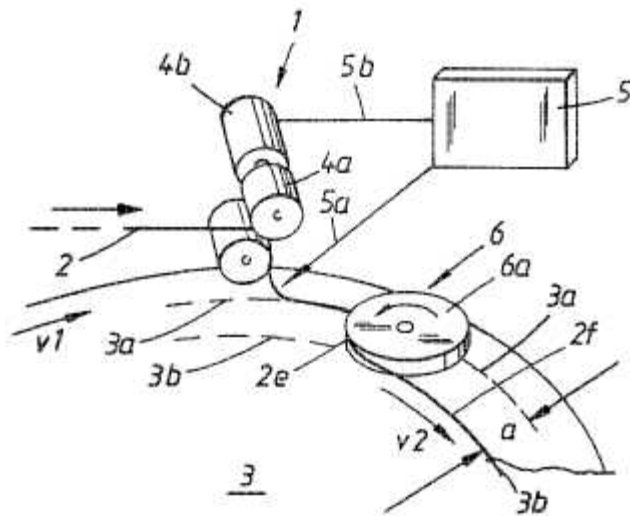
B21L 19/00

Appurtenances for chain-making not restricted to any particular process

Definition statement

This subclass/group covers:

Appurtenances for chain-making not restricted to any particular process, like e.g. chain feeding or cleaning arrangements.



Source: WO0236288

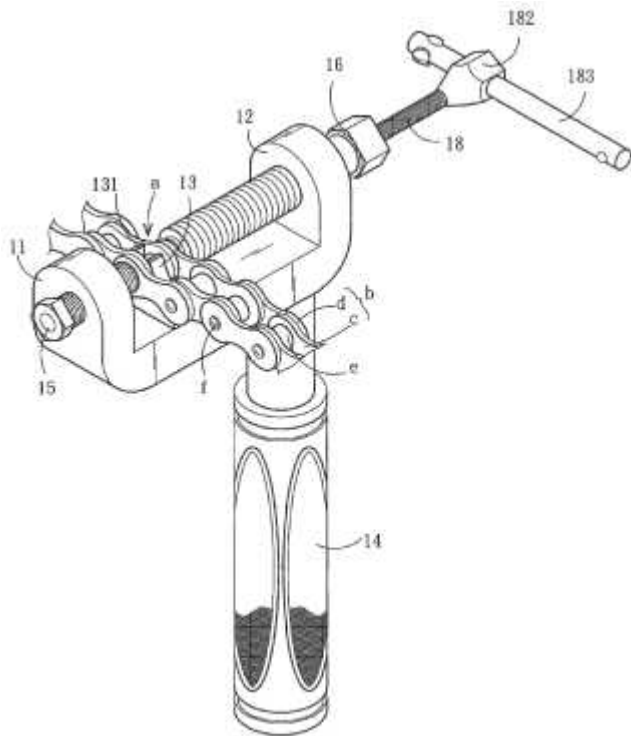
B21L 21/00

Tools or implements for repairing chains using metal-working operations. e.g. for detaching deformed chain links

Definition statement

This subclass/group covers:

Tools or implements for repairing chains using metal-working operations. e.g. for detaching deformed chain links.



Source: US20110179761

Informative references

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

<p>Hand tools for positioning and assembling or detaching sprocket chains, endless tracks or antiskid chains by press fit.</p>	<p>B25B 27/22</p>
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B21L 99/00

Subject matter not provided for in other groups of this subclass

Definition statement

This subclass/group covers:

Methods and devices for making chains or chain links not provided for in the groups [B21L 1/00](#) to [B21L 21/00](#).