

B21L

MAKING METAL CHAINS (making chains or chain links by casting [B22D 25/02](#); chains in general [F16G](#))

Definition statement

This place covers:

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

References

Limiting references

This place does not cover:

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

Informative references

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

Chains in general	F16G
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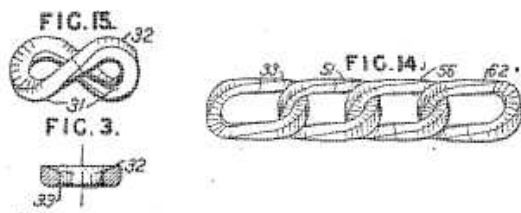
B21L 1/00

Making chains or chain links by bending workpieces of rod, wire, or strip to form links of oval or other simple shape ([B21L 3/00](#), [B21L 7/00](#) take precedence)

Definition statement

This place 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

Limiting references

This place 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

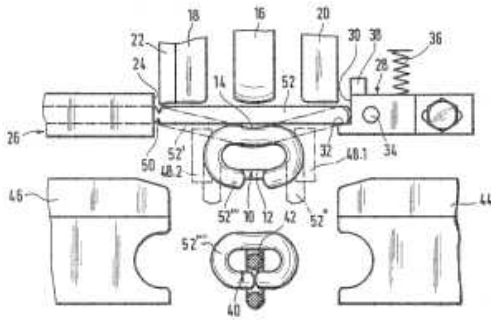
B21L 1/02

by bending the ends of the workpieces to abut

Definition statement

This place covers:

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



Source: US4694644

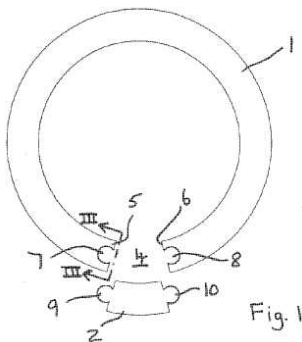
B21L 1/04

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

Definition statement

This place 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

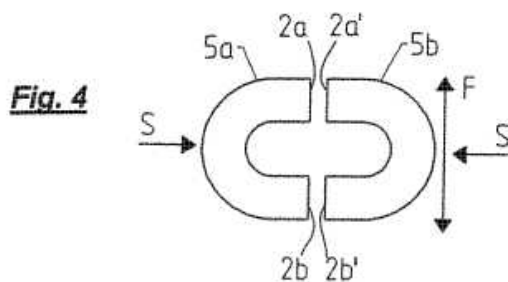
B21L 3/00

Making chains or chain links by bending the chain links or link parts and subsequently welding or soldering the abutting ends (B21L 7/00 takes precedence)

Definition statement

This place 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

Limiting references

This place 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
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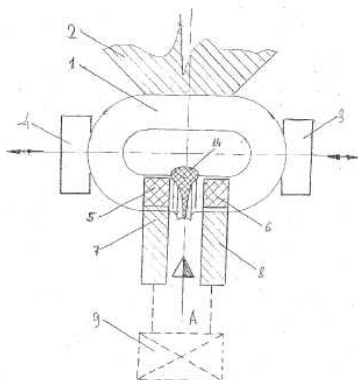
B21L 3/02

Machines or devices for welding chain links

Definition statement

This place covers:

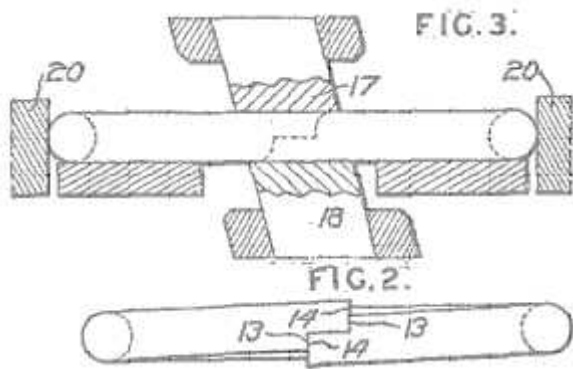
Methods and devices for welding chain links.



Source: DE10331400

B21L 3/04**by making use of forge or pressure welding****Definition statement***This place covers:*

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



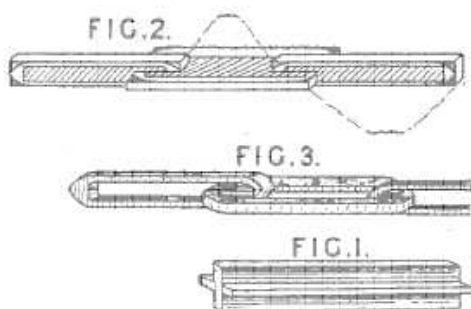
Source: GB689391

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 place 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 place 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

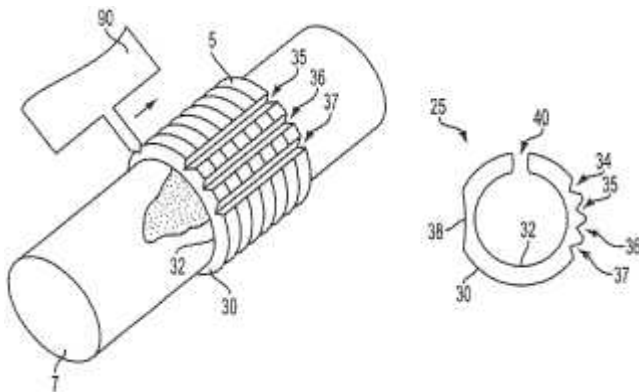
B21L 7/00

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 place 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

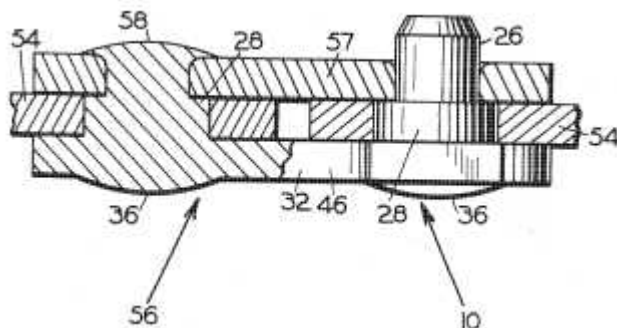
B21L 9/00

Making chains or chain links, the links being composed of two or more different parts, e.g. drive chains ([B21L 1/04](#), [B21L 7/00](#), [B21L 11/14](#), [B21L 13/00](#) take precedence)

Definition statement

This place 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

References

Informative references

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

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
Load carrier chains	B65G14/40
Endless traction elements in conveyors	B65G 17/08

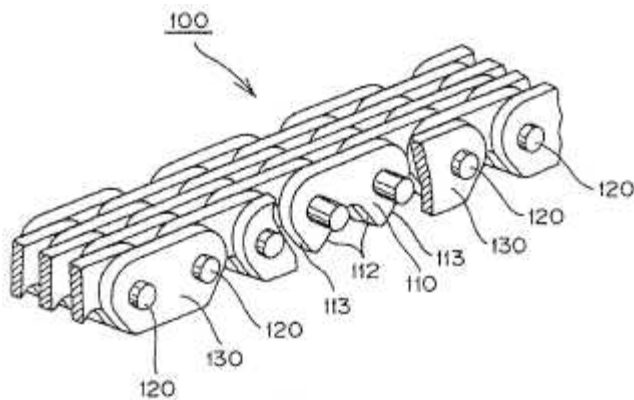
B21L 9/02

of roller-chain or other plate-link type

Definition statement

This place covers:

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



Source. US2007032325

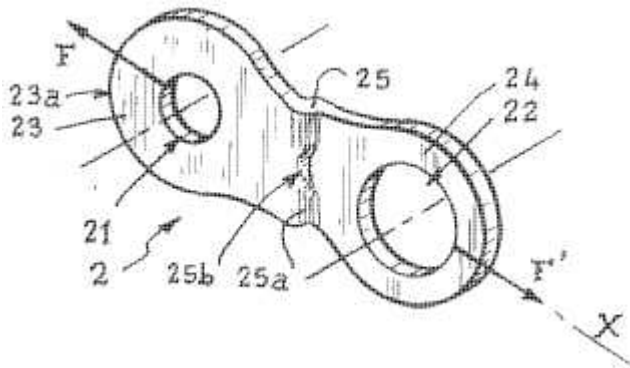
B21L 9/04

Punching or bending the different parts of the chain links

Definition statement

This place covers:

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



Source: FR2795474

References

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 place 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)

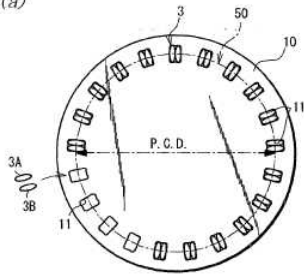
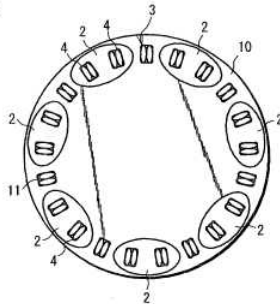


FIG. 1 (b)

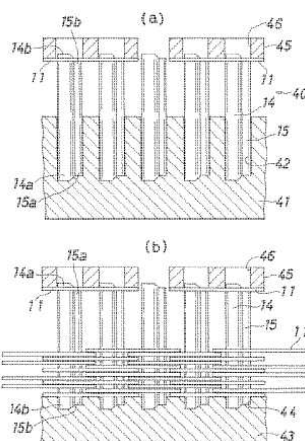


Source: EP1803511

B21L 9/065**{Assembling or disassembling}****Definition statement**

This place covers:

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



Source: JP2008188598

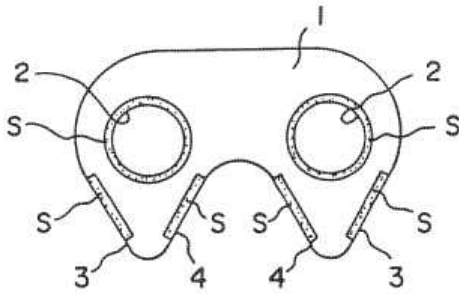
B21L 9/08

Combining the chain links with auxiliary parts, e.g. welding-on wear-resistant parts

Definition statement

This place covers:

Methods and devices for making chains of the type being composed of two or more different parts, wherein the chain links are combined with auxiliary parts, e.g. welded-on wear-resistant parts.



Source: US6068568

B21L 11/00

Making chains or chain links of special shape

Definition statement

This place covers:

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

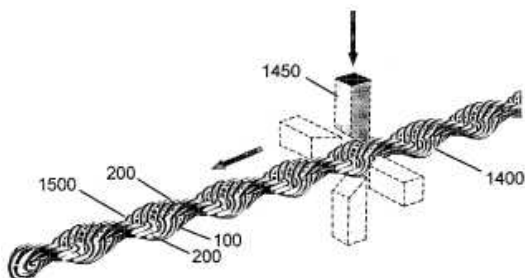
B21L 11/005

{Making ornamental chains ([B21L 11/02](#) - [B21L 11/14](#) take precedence; ornamental chains [A44C](#))}

Definition statement

This place covers:

Methods and devices for making ornamental chains.



Source: US20090241598

References

Limiting references

This place 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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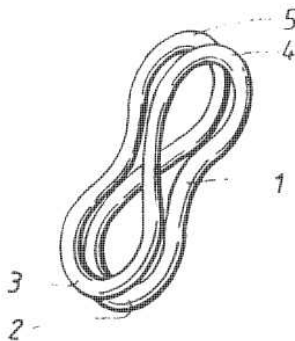
B21L 11/02

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 place covers:

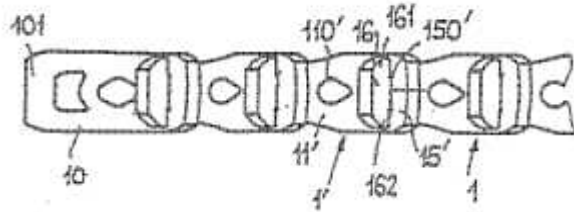
Methods and devices for making chains or chain links, wherein each link is formed of a single member of which both ends are bent or shaped to engage the middle portions of the next link.



Source: EP0774086

B21L 11/04**the ends being pierced or punched to form eyes****Definition statement***This place covers:*

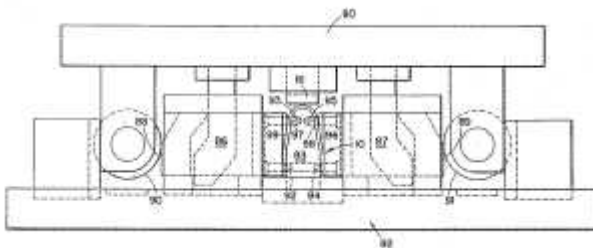
Methods and devices for making chains or chain links, wherein the ends of the links are pierced or punched to form eyes.



Source: DE19715707

B21L 11/06**the workpiece being of thin strip metal****Definition statement***This place covers:*

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



Source: US3869856

References**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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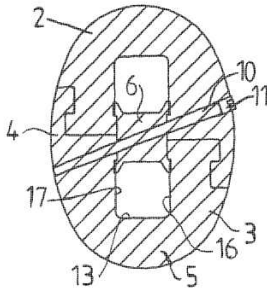
B21L 11/08

the ends being interengaged with other parts of the same link

Definition statement

This place covers:

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



Source: WO0246613

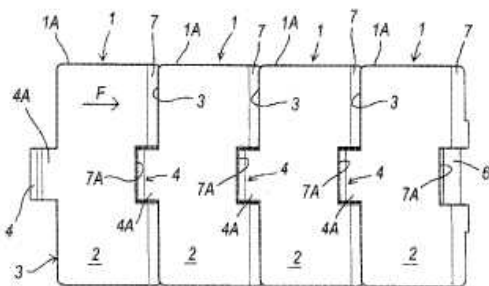
B21L 11/10

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
([B21L 11/02](#) takes precedence)

Definition statement

This place 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

Limiting references

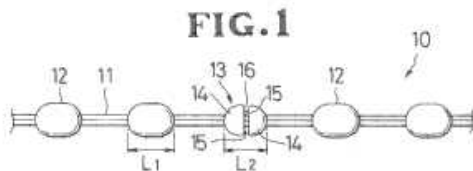
This place does not cover:

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 place covers:

Methods and devices for making bead chains.

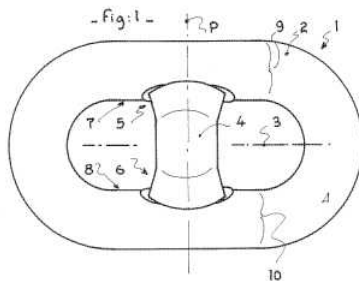


Source: EP0565379

B21L 11/14**Making chain links with inserted or integrally-formed studs****Definition statement**

This place covers:

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



Source: EP0736348

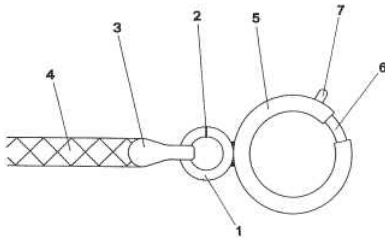
B21L 13/00

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

Definition statement

This place 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

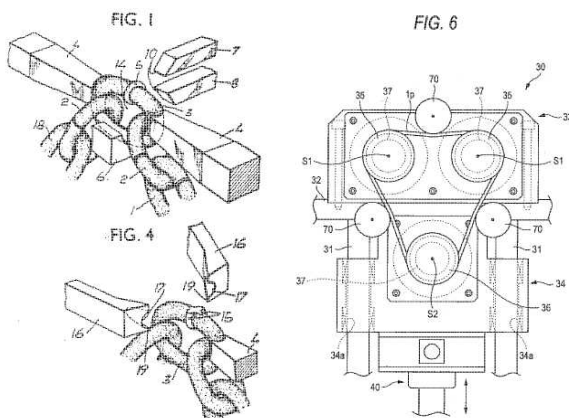
B21L 15/00

Finishing or dressing chains or chain links, e.g. removing burr material, calibrating ([B21L 9/06](#) takes precedence)

Definition statement

This place covers:

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



Source: GB1130249; EP1938916

References

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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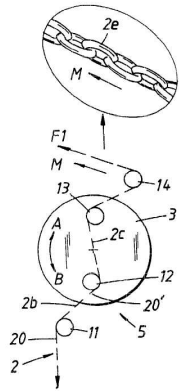
B21L 15/02

Twisting already closed links

Definition statement

This place covers:

Methods and devices for twisting already closed links.



Source: WO0228567

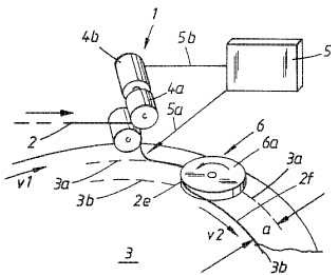
B21L 19/00

Appurtenances for chain-making not restricted to any particular process

Definition statement

This place covers:

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



Source: WO0236288

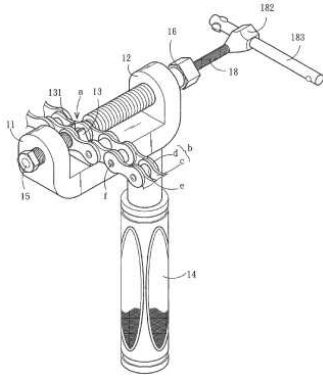
B21L 21/00

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

Definition statement

This place covers:

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



Source: US20110179761

References

Informative references

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

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

Subject matter not provided for in other groups of this subclass

Definition statement

This place covers:

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