

B60B

VEHICLE WHEELS (making wheels or wheel parts by rolling [B21H 1/00](#), by forging, hammering or pressing [B21K 1/28](#)); CASTORS; AXLES FOR WHEELS OR CASTORS; INCREASING WHEEL ADHESION

Definition statement

This place covers:

Wheels for all kinds of vehicles as cars, trucks, agricultural harvesters, tractors, cranes, locomotives, railcars, motorcycles, bicycles, wheelchairs, hospital beds, medical equipment and for all kinds of carts as perambulators, golf carts, pushcarts, dustbins or similar.

Wheels having specific properties or being of specific form.

Hub caps, wheel covers, wheel decorations, wheel mounted advertising panels.

Wheel hubs including wheel bearings, sealing arrangements, sensors and drive shaft/homokinetic joint arrangements in the case of driving wheels.

Castors for furniture, chairs, hospital beds, medical equipment, suitcases, pallets or similar.

Axles and wheel-axle combinations.

Apparatus for mounting/dismounting wheels, for holding wheels and for assembling/disassembling wheels.

Wheel traction/adhesion increasing means being permanently attached to the wheel or being permanently mounted to the vehicle chassis.

Relationships with other classification places

If the components of the wheels are only relevant by their functional features and not specially adapted, they are classified in the relevant functional subclasses and not in [B60B](#), see for bearings ([F16C 17/00](#) - [F16C 25/00](#)), sealings ([F16J 15/00](#)), couplings, clutches or freewheels ([F16D](#)), shafts ([F16C 1/00](#), [F16C 3/00](#)), sensors ([G01B](#), [G01H](#), [G01J](#), [G01K](#), [G01L](#), [G01P](#)).

There is a considerable overlap with subclasses [B60C](#), [B60G](#) and [B62D](#). Details are given in the relevant main-group definitions.

References

Limiting references

This place does not cover:

Making wheels or wheel parts by rolling	B21H 1/00
Making wheels or wheel parts by forging, hammering or pressing	B21K 1/28
Tracked vehicles and tracks therefore	B62D 55/00
Wheel balancing weights	F16F 15/324
Attachment means for wheel balancing weights	F16F 15/34

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Wheels for skateboards	A63C 17/01
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Wheels for roller skates	A63C 17/22
Wheels for model railway vehicles	A63H 19/22
Sledges with wheels	B62B 13/18 , B62B 15/008
Ice boats, sailing sledges with wheels	B62B 15/004
Wheels for aircrafts	B64C 25/36

Informative references

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

Production of wheels	B21D 53/26
Hand tools in general	B25
Tools for mounting tyres	B60C 25/00
Joining wheel units to motor vehicles or trailers during manufacturing, e.g. assembling	B62D 65/12

Special rules of classification

In this subclass, an Indexing Scheme is used:

The Indexing Scheme is an Indexing Scheme which is used in all maingroups under the subclass [B60B](#) "VEHICLE WHEELS; CASTORS; AXLES; INCREASING WHEEL ADHESION ". This Indexing Scheme is used for indexing information which is not limited to the scope of one of the main-groups in the subclass [B60B](#). This Indexing Scheme is used for indexing both, invention information and additional information. The use of this Indexing Scheme is obligatory for invention information.

The following main groups of an 'Indexing Scheme' are applicable:

- [B60Y 2200/00](#) type of product or vehicle where used or applied
- [B60B 2200/00](#) type of product or vehicle where used or applied for cases not covered by the scheme under [B60Y 2200/00](#)
- [B60B 2310/00](#), [B60B 2320/00](#), [B60B 2360/00](#), [B60B 2380/00](#) methods or operations used in manufacturing or maintenance; Materials; Bearings
- [B60B 2900/00](#) purpose of invention

Glossary of terms

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

Castor	One or more small wheels mounted on a carrier that is rotatably mounted to an object about an axis orthogonal to the rolling axis of the wheels, typically used for office chairs.
Hub	The hub does not form part of the wheel or wheel disc but is the wheel carrier the wheel disc is mounted to by the wheel bolts.

B60B 1/00

Spoked wheels; Spokes thereof (non-metallic [B60B 5/00](#) {; spoked wheels comprising rail-engaging elements [B60B 17/001](#); making wheel spokes [B21F 39/00](#)})

Definition statement

This place covers:

All types of wheels comprising either tension or compression spokes. The type of wheels ranging from bicycle wheels over light weight plastic wheels for strollers to heavy duty cast metal wheels.

All types of tension or compression spokes for wheels.

Attachment of spokes to the hub.

Attachment of spokes to the rim only in the case when the spoke is fastened to the rim by the use of a spoke nipple or a screw or when the filament winding to interact with the spoke nipple is concerned.

References

Limiting references

This place does not cover:

Full face disc wheels formed by joining several wheel parts where at least one part is formed by casting. The joining line being between disc and rim.	B60B 3/04 , B60B 3/06
Wheels comprising a hub portion being integral with spokes extending radially outwards where at least one part is formed by casting. The joining line being between disc and rim.	B60B 3/04 , B60B 3/06 , B60B 3/10
Full face disc wheels formed by joining several wheel parts where at least one part is formed by casting. The joining line lying in the area of the rim cross-section.	B60B 3/04 , B60B 3/06 , B60B 25/00
Wheels comprising a hub portion being integral with spokes extending radially outwards where at least one part is formed by casting. The joining line lying in the area of the rim cross-section.	B60B 3/04 , B60B 3/06 , B60B 3/10 , B60B 25/00
Spoked wheels formed by forging or deep-drawing of a semi-finished good or a metal blank having holes or openings stamped into the wheel disc, thus simulating spoked wheels	B60B 3/10
Wheels of high resiliency	B60B 9/00
Direct attachment of the spokes to the rim (without the use of e.g. spoke nipples or screws)	B60B 21/06
Making of wheel spokes	B21F 39/00

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Spoked wheels made of synthetic material	B60B 5/02
Spoked wheels made of wood	B60B 5/04
Spoked wheels comprising rail-engaging elements	B60B 17/001

Attaching the spokes to the rim using auxiliary means (e.g. spoke nipples, screws) in cases when the interaction of the auxiliary means with the rim is the predominant aspect.	B60B 21/06
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Informative references

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

Production of spoke wheels	B21D 53/268
Non-pneumatic rubber tyres	B60C 7/10

Special rules of classification

[B60B 1/10](#) concerns only spokes made of sheet metal and not spoked wheels made of sheet metal having stamped holes to simulate spokes.

B60B 3/00

Disc wheels, i.e. wheels with load-supporting disc body (non-metallic [B60B 5/00](#); wheel cover discs [B60B 7/00](#) {; disc wheels comprising rail-engaging elements [B60B 17/0006](#)})

Definition statement

This place covers:

All types of disc wheels, where the disc body is load-supporting.

Disc being of the full face or the apertured type being either provided with small size holes or larger openings simulating spokes.

Disc wheels being made of stamped steel blanks, forged aluminium or other light alloys or cast metallic material.

References

Limiting references

This place does not cover:

Spoked wheels integrally formed by casting (wheel formed in one piece in the casting mold)	B60B 1/08
Wheel cover discs	B60B 7/00
Disc wheels with rims removably attached to the disc body	B60B 23/00

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Disc wheels made of synthetic material	B60B 5/02
Disc wheels comprising rail-engaging elements	B60B 17/001

Informative references

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

Production of wheels	B21D 53/26
Wheels of dustbins	B65F1/146
Locking devices for wheel bolts or nuts	F16B 39/28
Anti-theft devices for wheel bolts or nuts	F16B 41/00

B60B 3/02

with a single disc body integral with rim

Definition statement

This place covers:

Disc wheels where disc body and rim were joined during the forming procedure.

References**Limiting references**

This place does not cover:

Spoked wheels integrally formed by casting (wheel formed in one piece in the casting mold)	B60B 1/08
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Special rules of classification

In case that the wheels were integrally formed by casting they are classified in addition in group [B60B 3/06](#).

B60B 3/04

with a single disc body not integral with rim {, i.e. disc body and rim being manufactured independently and then permanently attached to each other in a second step, e.g. by welding}

Definition statement

This place covers:

Disc wheels where the rim was permanently attached to the disc body in a later step after having been formed, e.g. by welding.

B60B 5/00

Wheels, spokes, disc bodies, rims, hubs, wholly or predominantly made of non-metallic material (wheel cover discs [B60B 7/00](#); wheels of high resiliency [B60B 9/00](#) {; wheel bodies comprising rail-engaging elements characterised by use of non-metallic material [B60B 17/0003](#)})

Definition statement

This place covers:

All types of wheels being made from synthetic material as fibre reinforced resins, compound materials et. al. and wood;

Focussing on specific constructional needs when using synthetic materials;

Compositions;

Properties or manufacturing/handling of the synthetic material.

References

Limiting references

This place does not cover:

Wheel cover discs	B60B 7/00
Wheels of high resiliency	B60B 9/00
Castors	B60B 33/00

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Wheels comprising rail-engaging elements	B60B 17/001
Wheels for suitcases	A45C 5/14

Informative references

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

Shaping or joining of plastics	B29C
Shaping plastic materials comprising reinforcements	B29C 70/00
Indexing codes associated with B29C concerning plastic materials and condition, state or form of material used	B29K
Indexing codes associated with B29C indicating vehicle type or part of the vehicle where plastic part is used for	B29L 2031/30
Indexing codes associated with B29C indicating type of wheel used for	B29L 2031/32

B60B 7/00

Wheel cover discs, rings, or the like, for ornamenting, protecting {, venting,} or obscuring, wholly or in part, the wheel body, rim, hub, or tyre sidewall {, e.g. wheel cover discs, wheel cover discs with cooling fins (wheels with cooling fins not provided on the wheel cover disc [B60B 19/10](#); apparatus or tools for removing or attaching cover discs hub caps or the like [B60B 31/06](#))}

Definition statement

This place covers:

All elements (e.g. wheel covers, hub caps or wheel rings) removably attached at the laterally outer side of the wheel for ornamenting, protecting, venting, aerodynamically optimising or obscuring, wholly or in part, the wheel body, rim, hub, or tyre sidewall.

References

Limiting references

This place does not cover:

Wheels with cooling fins not provided on the wheel cover disc	B60B 19/10
Apparatus or tools for removing or attaching cover discs, hub caps or the like	B60B 31/06
Masking covers used to protect the wheel as a whole or partly, e.g. when the tires or the car body are sprayed.	B05B 12/30
Wheel balancing weights	F16F 15/324

Informative references

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

Production of wheel covers	B21D 53/32
Wheel nut covers or bolt covers	F16B 37/14
Mobile visual advertising	G09F 21/00

Glossary of terms

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

Hub cap	Cover for the radially central part of the wheel where the hub of the axle is located underneath.
Wheel cover	Element covering the whole wheel disc extending to the rim of the wheel or the tire.
Wheel ring	Ring element covering part of the wheel disc, e.g. extending either from the hub cap to the rim or covering just the area adjacent to the rim.

B60B 9/00

Wheels of high resiliency {, e.g. with conical interacting pressure-surfaces (resilient wheels comprising rail-engaging elements [B60B 17/0027](#))}

Definition statement

This place covers:

Wheels offering resilience without using pneumatic tyres

References

Limiting references

This place does not cover:

Wheels with resiliently mounted plate like shoes	B60B 15/20
Expansible wheels	B60B 19/04
Hubs per se	B60B 27/00

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Resilient wheels with rail engaging elements	B60B 17/0027
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Informative references

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

Non-pneumatic rubber tyres	B60C 7/10
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Glossary of terms

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

Resilient	Acting spring-like, but not intended to change the diameter permanently
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B60B 11/00

Units comprising multiple wheels arranged side by side; Wheels having more than one rim or capable of carrying more than one tyre

Definition statement

This place covers:

Arrangements where more than one wheel is located at one end of an axle. The arrangement consisting either of multiple wheels being mounted to one hub or by single wheels having multiple rims or carrying several tires on one rim. These arrangements predominantly serving the purpose of increased load carrying capacity, uniform distribution of load or of offering emergency running capabilities.

References

Limiting references

This place does not cover:

Collapsible tires	B60C 3/08
Tires characterised by means enabling restricted operation in damaged or deflated condition	B60C 17/02

Informative references

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

Suppression of vibration in systems	F16F 15/00
Testing static and dynamic balance of machines or structures	G01M 1/00

B60B 15/00

Wheels or wheel attachments designed for increasing traction (vehicle tires [B60C](#); non-skid devices temporarily attachable to resilient tires or resiliently-tired wheels [B60C](#))

Definition statement

This place covers:

Wheels or wheel attachments that increase traction off-road, especially for agricultural or constructional vehicles. Wheels of the staircase negotiating type are classified under [B60B 15/18](#).

References

Limiting references

This place does not cover:

Means for increasing wheel adhesion	B60B 39/00
Snow chains	B60C 27/00
Off-road tires	B60C 2200/14

Informative references

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

Agricultural combines	A01B 49/00
Other agricultural machines	A01B 51/00
Tractors	B62D 49/00

B60B 17/00

Wheels characterised by rail-engaging elements ({wheel-axle combinations [B60B 37/00](#);} of model railways [A63H 19/22](#))

Definition statement

This place covers:

Wheels cooperating with rails in railway, crane or other applications. Rail wheels of the solid type, comprising resilient inserts or having elastic tyres. Features to increase resiliency, reduce vibrations and to achieve insonorisation of rail-engaging wheels. This group precedes over [B60B 1/00](#), [B60B 3/00](#) and [B60B 9/00](#).

References

Limiting references

This place does not cover:

Non-metallic rail wheels	B60B 5/00
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Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Wheels of model railways	A63H 19/22
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Informative references

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

Wheel axle combinations	B60B 37/00
Locomotives	B61C
Railway vehicles	B61D

B60B 17/0017

{with insonorisation means}

Definition statement

This place covers:

Noise reducing measures applied on the disc portion of rail wheels comprising at least two or more axially spaced discs.

B60B 17/0024

{with noise reducing means ([B60B 17/0017](#) takes precedence)}

Definition statement

This place covers:

Noise reducing measures applied on the disc portion of single disc wheels.

B60B 17/0034**{of rubber or other non-metallic material}****Definition statement***This place covers:*

Rail wheels provided with noise or vibration reducing resilient inserts between the disc and the rim or tyre.

B60B 19/00**Wheels not otherwise provided for or having characteristics specified in one of the subgroups of this group****Definition statement***This place covers:*

Wheels being convertible, e.g. from road wheel to rail wheel;

Wheels specially designed for alternative use on road and rail;

Expansible wheels; with compartments for fluid, packing or loading material;

Buoyant wheels;

Wheels with lubricating passages, channels, or reservoirs;

Wheels with cooling fins;

Roller-type wheels (e.g. for golf-carts) and ball-type wheels.

References**Limiting references***This place does not cover:*

Wheel covers with cooling fins	B60B 7/00
Castors in general	B60B 33/00

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Wheels for suitcases	A45C 5/14
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References out of a residual place

Examples of places in relation to which this place is residual:

Wheels, wheel-sets or wheel accessories	B60B 1/00 - B60B 17/00
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Glossary of terms

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

Ball-type wheels	Spherical wheels
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B60B 19/14

Ball-type wheels ([B60B 19/06](#) takes precedence)

Definition statement

This place covers:

Wheels having a spherical shape and a fixed rotation axis.

References

Limiting references

This place does not cover:

Non-spherical wheels being of the multi-directional type	B60B 19/003
Spherical wheels being of the multi-directional type	B60B 33/08

B60B 21/00

Rims (non-metallic [B60B 5/00](#); of high resiliency [B60B 9/00](#); capable of carrying more than one tyre [B60B 11/04](#); multiple rims on a single wheel body [B60B 11/06](#); of multi-part type [B60B 25/00](#); metal tyres [B60C](#))

Definition statement

This place covers:

Wheel rims or characteristics of the rim itself.

Specific characteristics being transverse section profile, form of the tire seat or flanges;

Spoke attachment means (e.g. nipple/nipple seat combinations, rim/spoke configuration that allow direct attachment without the use of spoke nipples or screws);

Breaking surfaces located on the rim and accessories as lining bands;

Noise attenuating devices (helmholtz resonators).

References

Limiting references

This place does not cover:

Spoke nipples as far as the interaction with the spoke is predominant	B60B 1/04
Non-metallic rims	B60B 5/02
High-resiliency rims	B60B 9/00
Rims carrying more than one tire	B60B 11/04
Multiple rims on a single wheel body	B60B 11/06
Multi-part type rims	B60B 25/00

Connecting means for segmented rims, e.g. for rims although being made of one piece but not being seamless, for connecting the end portions	B60B 25/02
Run flat rings	B60C 17/04

Informative references

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

Production of wheel rims	B21D 53/30
Metal tires	B60C 7/06

B60B 23/00

Attaching rim to wheel body (attaching spokes to rim [B60B 1/04](#), [B60B 1/14](#); attaching rims resiliently to wheel body [B60B 9/00](#) {; devices for fastening or securing constructional elements or machine parts together [F16B](#)})

Definition statement

This place covers:

Releasable attachment of wheel rims to the wheel disc. Permanent attachment of wheel rims to the disc or spokes by welding or integrally casting is not covered by this group.

References

Limiting references

This place does not cover:

Spoked wheels with tension spokes	B60B 1/02
Attaching compression spokes to rim	B60B 1/14
Rims permanently attached to wheel discs after having been formed, e.g. by welding	B60B 3/04
Attaching rim resiliently to wheel body	B60B 9/00
Attaching tension spokes to rim	B60B 21/06
Axle units adjustable for varying track	B60B 35/10

Informative references

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

Rims integrally formed with spoked wheels by metal casting	B60B 1/08
Rims permanently joined to wheel during forming, e.g. by stamping, rolling, deep-drawing	B60B 3/02
Rims integrally formed with wheel disc by metal casting	B60B 3/06
Rims made of synthetic material and integrally formed with wheel body	B60B 5/02
Metal tires	B60C 7/06
Tractors of variable track width	B62D 49/0678
Devices for fastening or securing constructional elements or machine parts together	F16B

B60B 25/00

Rims built up of several main parts {Locking means for the rim parts} (tools for assembling divided rims [B60B 31/04](#))

Definition statement

This place covers:

Segmented rims (i.e. rims where the circumference is constituted by a number of segments);

Circumferentially split rims (i.e. rims where the rim is constituted of a number of annular rim elements joined along a circumferential seam);

Connecting means for segmented rims (including bicycle rims being made of one piece but not being of the seamless type and having two end portions);

Rims with dismountable flange rings, seat rings or lock rings;

Sealing means for rims built up of several main parts;

Safety arrangements to avoid dismounting when tire is still under pressure.

References

Limiting references

This place does not cover:

Tools for assembling divided rims	B60B 31/04
Friction welding methods	B23K 20/12 , B23K 2201/06

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Bicycle rims being made of one piece but not being of the seamless type and having two end portions	B60B 21/02
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B60B 27/00

Hubs (non-metallic [B60B 5/00](#); of high resiliency [B60B 9/00](#))

Definition statement

This place covers:

Wheel hubs including wheel bearings, sealing arrangements, sensors and drive shaft/homokinetic joint arrangements in the case of driving wheels;

[B60B 27/00](#) refers only to arrangements where the hub radially outer part is non-rotating and mounted to a knuckle;

Relationships with other classification places

If the components of the hubs are only relevant by their functional features and not specially adapted, they are classified in the relevant functional subclasses and not in [B60B 27/00](#), see for bearings

([F16C 17/00](#) - [F16C 25/00](#)), sealings ([F16J 15/00](#)), couplings, clutches and freewheels ([F16D](#)), shafts ([F16C 1/00](#), [F16C 3/00](#)), sensors ([G01B](#), [G01H](#), [G01J](#), [G01K](#), [G01L](#), [G01P](#)).

References

Limiting references

This place does not cover:

Non-metallic hubs	B60B 5/00
Hubs of high resiliency	B60B 9/005

Informative references

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

Pulling or pressing devices for bearings, hubs, sleeves	B25B 27/02
Hub motors e.g. electrical or hydraulical	B60K 7/00
Bicycles	B62K
Axle suspensions for mounting axles rigidly on cycle frame or fork	B62K 25/02
Propulsion of bicycles	B62M 1/00
Sealings of bearings	F16C 33/76

B60B 27/06

adapted to be fixed on axle

Definition statement

This place covers:

Hub arrangements where the radially outer part of the hub is rotating while the radially inner or center part respectively of the hub is non-rotating and could be mounted to a non-rotating fixed axle.

B60B 29/00

Apparatus or tools for mounting or dismounting wheels {(mounting of wheels at assembly lines [B62D 65/12](#))}

Definition statement

This place covers:

Apparatus or tools necessary for mounting or dismounting wheels to be used in garages or by individuals. The apparatus or tools possibly comprising lifting or aligning means or being mounted on a dolly. Holding means to be used during mounting/dismounting of wheels.

References

Limiting references

This place does not cover:

Adjustable axle units for varying track	B60B 35/10
Wrenches per se	B25B 13/00
Hand driven gear-operated wrenches per se	B25B 17/00

Hand driven gear-operated wrenches with torque amplification per se	B25B 17/02
Power driven nut setting or loosening tools per se	B25B 21/00
Removing tyres from, or mounting tyres on, wheels	B60C 25/00
Mounting of wheels on assembly lines	B62D 65/12

Informative references

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

Pulling devices for wheels	B25B 27/02
Mobile workshops in trucks	B60P 3/14

Glossary of terms

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

Dolly	Rolling chassis provided with wheels or castors to allow quick and easy displacement of heavy tools or apparatus.
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B60B 30/00

Means for holding wheels or parts thereof (spare wheel stowing, holding or mounting arrangements on vehicles [B62D 43/00](#))

Definition statement

This place covers:

Means for holding wheels or parts thereof by gripping the wheel itself or the tire. The means possibly being mounted on a dolly. Means where the holding and not the mounting of the wheels is predominant.

References

Limiting references

This place does not cover:

Spare wheel stowing, holding or mounting arrangements on vehicles	B62D 43/00
Wheeled working platforms	E06C 1/393 , E06C 7/46 , A47C 12/00

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Show stands, hangers, or shelves adapted for tyres or wheels	A47F 7/04
Mounting of wheels on assembly lines	B62D 65/12
Wheel supporting trolleys for raising or lowering vehicles	B66F 7/246
Bearing support assemblies for receiving vehicle wheel in balancing machines	G01M 1/045

Informative references

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

Wheel holding means when used during mounting/dismounting of wheels	B60B 29/00
Removing tyres from, or mounting tyres on, wheels	B60C 25/01

Glossary of terms

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

Dolly	Rolling chassis provided with wheels or castors to allow quick and easy displacement of heavy tools or apparatus.
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B60B 31/00**Apparatus or tools for assembling or disassembling wheels****Definition statement**

This place covers:

Apparatus or tools for assembling or disassembling wheels where the rim is not integral with the disc body, where the rim consists of several main parts, where spokes have to be mounted.

Apparatus or tools for attaching or removing wheel covers, hub caps or alike.

References**Limiting references**

This place does not cover:

Removing tyres from, or mounting tyres on, wheels	B60C 25/01
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Informative references

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

Trueing of damaged or bent areas of wheel rims, restoring form, removing local distortions	B21D 1/06 , B21D 1/08 , B21D 3/02
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B60B 33/00**Castors in general; {Anti-clogging castors} (castors for large containers [B65D 90/18](#))****Definition statement**

This place covers:

All types of castors, i.e. one or more small wheels mounted on a carrier that is rotatably mounted to an object about an axis orthogonal to the rolling axis of the wheels; the mounting of the castors to the object; the construction of the wheels, the braking mechanisms and the swivel mechanisms; specific arrangements avoiding clogging.

References

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Wheels for suitcases	A45C 5/14
Stretchers with wheels	A61G 1/02
Wheeled carriages for stretchers	A61G 1/02
Wheelchairs	A61G 5/00
Wheels for hospital beds	A61G 7/00
Handcarts	B62B 1/00 , B62B 3/00 , B62B 5/00
Perambulators	B62B 7/00
Castors for large containers	B65D 90/18

Informative references

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

Spoked plastic wheels for e.g. strollers	B60B 1/006 , B60B 5/02
Plastic wheels of the fullface type for e.g. dustbins	B60B 3/00 , B60B 5/02

Synonyms and Keywords

In patent documents, the following words/expressions are often used as synonyms:

- "castor" and "caster"

B60B 33/08

Ball castors {([B60B 33/0028](#) takes precedence)}

Definition statement

This place covers:

Spherical/Ball shaped rollers with a variable rotation axis, i.e. being of the multi-directional type. Typically no real axle exists but the sphere forming the main roller is suspended by multiple guiding rollers or kept in a partial spherical shell.

References

Limiting references

This place does not cover:

Non-spherical wheels being of the multi-directional type	B60B 19/003
Spherical wheels having a fixed rotation axle.	B60B 19/14

B60B 35/00

Axle units; Parts thereof (steerable vehicle stub axles [B62D](#)); Arrangements for lubrication of axles}

Definition statement

This place covers:

Dead and driven axles of constant or adjustable track;

One-piece or composite axles and axle housings predominantly for trucks, busses, constructional or agricultural vehicles.

Elements and devices for emergency repairs of broken axles (e.g. clamping arrangements for replacement axle elements) are covered by [B60B 35/14](#).

References

Limiting references

This place does not cover:

Units comprising multiple wheels arranged side-by-side	B60B 11/00
Attachment of wheels to axles	B60B 37/00
Tandem wheel arrangements	B60G 5/00
Twist beam axles	B60G 21/05
Steerable vehicle stub axles	B62D 7/00

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Agricultural combines	A01B 49/00
Other agricultural machines	A01B 51/00
Rail vehicle axle-boxes	B61F 15/00
Tractors	B62D 49/00
Bogies for endless track vehicles	B62D 55/10

Informative references

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

Tools for axial movement of wheels on axles	B60B 29/008
Suspension of rigid axles	B60G 9/00
Tractors with variable track width	B62D 49/0678
Joining suspensions or wheel units to other sub-units or components	B62D 65/12
Oiling, lubricating inserts	F16N 7/02 , F16N 21/06

B60B 37/00

Wheel-axle combinations, e.g. wheel sets (units comprising multiple wheels arranged side-by-side [B60B 11/00](#); rail vehicle axle-boxes [B61F](#))

Definition statement

This place covers:

Axles with wheels being integrally formed with the axle, rigidly attached to the axle or one or more wheels being individually rotatable around the axle.

References

Limiting references

This place does not cover:

Units comprising multiple wheels arranged side-by-side	B60B 11/00
Tandem wheel arrangements	B60G 5/00

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Agricultural combines	A01B 49/00
Other agricultural machines	A01B 51/00
Locomotives	B61C
Railway vehicles	B61D
Rail vehicle axle-boxes	B61F 15/00
Tractors	B62D 49/00
Bogies for endless track vehicles	B62D 55/10

Informative references

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

Tractors of variable track width	B62D 49/0678
Movable platforms comprising lifting devices	B66F 11/04

B60B 39/00

Increasing wheel adhesion (wheels, wheel attachments or tyre attachments, designed for increasing traction [B60B 15/00](#), [B60C](#); tyre constructions [B60C](#); road surface conditioning to prevent slipperiness [E01C](#))

Definition statement

This place covers:

Apparatus to increase wheel adhesion under adverse road conditions as snow, ice or water;

Vehicle chassis mounted non-skid chains;

Vehicle fittings to improve the road surface in front of the wheels by scattering or dispensing material or by directing a gas stream.

References

Limiting references

This place does not cover:

Wheels or wheel attachments designed for increasing wheel traction	B60B 15/00
Tire mounted snow chains	B60C 27/00
Off-road tires	B60C 2200/14

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Sanding devices for locomotives	B61C 15/10
Combined control of sanding apparatus and brakes of rail vehicles	B61H

Informative references

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

Temporary road surfaces	E01C 9/08
Road surface conditioning to prevent slipperiness in general	E01C 11/24