SECTION B — PERFORMING OPERATIONS; TRANSPORTING

B60 VEHICLES IN GENERAL

B60G VEHICLE SUSPENSION ARRANGEMENTS (air-cushion vehicles B60V; connections between vehicle bodies and vehicle frames B62D 24/00) **[5]**

Note(s)

Attention is drawn to the Note following the title of class B60.

Subclass index

RIGID SUSPENSION.....1/00
RESILIENT SUSPENSION
General structures
for single wheels; single sets of tandem wheels; pivoted suspension arms and accessories therefor….3/00, 5/00, 7/00
for rigid axle or axle housing for two or more wheels.....9/00
Characterised by arrangement, location, or kind of: springs; vibration-dampers; or combined springs and dampers.....11/00, 13/00, 15/00
Characterised by adjustment.....17/00
SUSPENSIONS WITH MEANS FOR SENSING GROUND UNEVENNESS.....23/00
INTERCONNECTED SYSTEMS FOR RESILIENTLY-SUSPENDED WHEELS.....21/00
OTHER SUSPENSION ARRANGEMENTS.....99/00

1/00 Suspensions with rigid connection between axle and frame

1/02 • with continuous axle
1/04 • with divided axle

3/00 Resilient suspensions for a single wheel (pivoted suspension arms per se, attachment thereof to sprung part of the vehicle, buffer means for limiting movement of arms B60G 7/00; characterised by arrangement, location, or type of springs B60G 11/00)

3/01 • the wheel being mounted for sliding movement, e.g. in or on a vertical guide (camber maintaining means B60G 3/26) **[5]**
3/02 • with a single pivoted arm
3/04 • • the arm being essentially transverse to the longitudinal axis of the vehicle
3/06 • • • the arm being rigid
3/08 • • • • the arm forming the axle housing
3/10 • • • the arm itself being resilient, e.g. leaf spring
3/12 • • the arm being essentially parallel to the longitudinal axis of the vehicle
3/14 • • • the arm being rigid
3/16 • • • the arm itself being resilient, e.g. leaf spring
3/18 • with two or more pivoted arms, e.g. parallelogram
3/20 • • all arms being rigid
3/22 • • • a rigid arm forming the axle housing
3/24 • • • a rigid arm being formed by the live axle
3/26 • • • Means for maintaining substantially-constant wheel camber during suspension movement
3/28 • • at least one of the arms itself being resilient, e.g. leaf spring

5/00 Resilient suspensions for a set of tandem wheels or axles having interrelated movements

5/01 • the set being characterised by having more than two successive axles **[5]**
5/02 • mounted on a single pivoted arm
5/03 • • the arm itself being resilient, e.g. a leafspring (B60G 5/053 takes precedence) **[5]**
5/04 • with two or more pivoted arms, the movements of which are resiliently interrelated
5/047 • • at least one arm being resilient, e.g. a leafspring (B60G 5/053 takes precedence) **[5]**
5/053 • • a leafspring being used as equilibration unit between two axle-supporting units **[5]**
5/06 • • the arms turning on a common pivot

7/00 Pivoted suspension arms; Accessories thereof (means for maintaining substantially-constant wheel camber during suspension movement B60G 3/26)

7/02 • Attaching arms to sprung part of vehicle
7/04 • Buffer means for limiting movement of arms

9/00 Resilient suspensions for a rigid axle or axle housing for two or more wheels

9/02 • the axle or housing being pivotally mounted on the vehicle
9/04 • the axle or housing not being pivotally mounted on the vehicle

11/00 Resilient suspensions characterised by arrangement, location, or kind of springs (single-wheel suspension by pivoted arm resilient in itself B60G 3/00; adjusting spring characteristic B60G 17/00; springs per se F16F)

Note(s)

In this group, the following terms or expressions are used with the meanings indicated:

- "torsion bar" includes torsion tube or the like;
- "rubber" includes synthetic substitutes of a similar nature.

11/02 • having leaf springs only
11/04 • • arranged substantially parallel to the longitudinal axis of the vehicle
11/06 • • arranged obliquely to the longitudinal axis of the vehicle
11/08 • • arranged substantially transverse to the longitudinal axis of the vehicle
11/10 • • characterised by means specially adapted for attaching the spring to axle or sprung part of the vehicle
11/107 • • • Sliding or rolling mountings **[5]**
11/113 • • • Mountings on the axle (B60G 11/107 takes precedence) **[5]**
11/12 • • • Links, pins, or bushes
11/14 • having helical, spiral, or coil springs only
11/15 • • Coil springs resisting deflection by winding up **[5]**
11/16 • • characterised by means specially adapted for attaching the spring to axle or sprung part of the vehicle
11/18 • having torsion-bar springs only
11/20 • • characterised by means specially adapted for attaching the spring to axle or sprung part of the vehicle
11/22 • having rubber springs only
11/23 • • of the torsional-energy-absorption type **[5]**
11/24 • • characterised by means specially adapted for attaching the spring to axle or sprung part of the vehicle
11/26 • having fluid springs only, e.g. hydropneumatic springs (B60G 15/12 takes precedence)
11/27 • • wherein the fluid is a gas **[5]**
11/28 • • characterised by means specially adapted for attaching the spring to axle or sprung part of the vehicle
11/30 • • having pressure fluid accumulator therefor, e.g. accumulator arranged in vehicle frame
11/32 • having springs of different kinds
11/34 • • including leaf springs
11/36 • • • and also helical, spiral, or coil springs
11/38 • • • and also rubber springs
11/40 • • • • the rubber springs being attached to the axle
11/42 • • • • the rubber springs being attached to sprung part of the vehicle
11/44 • • • and also torsion-bar springs
11/46 • • • and also fluid springs
11/48 • • not including leaf springs
11/50 • • • having helical, spiral, or coil springs, and also torsion-bar springs
11/52 • • • having helical, spiral, or coil springs, and also rubber springs
11/54 • • • • with rubber springs arranged within helical, spiral or coil springs
11/56 • • • having helical, spiral or coil springs, and also fluid springs
11/58 • • • • arranged coaxially
11/60 • • • having both rubber springs and torsion-bar springs
11/62 • • • having both rubber springs and fluid springs
11/64 • • • having both torsion-bar springs and fluid springs

13/00 Resilient suspensions characterised by arrangement, location, or type of vibration-dampers (adjusting damping effect B60G 17/06; vibration-dampers per se F16F)
13/02 • having dampers dissipating energy, e.g. frictionally
13/04 • • mechanically, e.g. having frictionally-engaging springs as damping elements
13/06 • • of fluid type
13/08 • • • hydraulic
13/10 • • • pneumatic
13/12 • • • quasi-fluid, i.e. having powdered medium
13/14 • having dampers accumulating utilisable energy, e.g. compressing air
13/16 • having dynamic absorbers as main damping means, i.e. spring-mass system vibrating out of phase
13/18 • • combined with energy-absorbing means

15/00 Resilient suspensions characterised by arrangement, location, or type of combined spring and vibration-damper, e.g. telescopic type (combined spring and vibration-dampers per se F16F) **[5]**
15/02 • having mechanical spring
15/04 • • and mechanical damper
15/06 • • and fluid damper
15/07 • • • the damper being connected to the stub axle and the spring being arranged around the damper **[5]**
15/08 • having fluid spring
15/10 • • and mechanical damper
15/12 • • and fluid damper
15/14 • • • the damper being connected to the stub axle and the spring being arranged around the damper **[5]**

17/00 Resilient suspensions having means for adjusting the spring or vibration-damper characteristics, for regulating the distance between a supporting surface and a sprung part of vehicle or for locking suspension during use to meet varying vehicular or surface conditions, e.g. due to speed or load [5]
17/005 • Suspension locking arrangements **[5]**
17/015 • the regulating means comprising electric or electronic elements (B60G 17/005 takes precedence) **[5, 2006.01]**
17/016 • • characterised by their responsiveness, when the vehicle is travelling, to specific motion, a specific condition, or driver input **[2006.01]**
17/0165 • • • to an external condition, e.g. rough road surface, side wind **[2006.01]**
17/017 • • characterised by their use when the vehicle is stationary, e.g. during loading, engine start-up or switch-off **[2006.01]**
17/018 • • characterised by the use of a specific signal treatment or control method **[2006.01]**
17/0185 • • • for failure detection **[2006.01]**
17/019 • • characterised by the type of sensor or the arrangement thereof **[2006.01]**
17/0195 • • characterised by the regulation being combined with other vehicle control systems **[2006.01]**
17/02 • Spring characteristics (B60G 17/005-B60G 17/015 take precedence) **[5]**
17/027 • • Mechanical springs regulated by fluid means (B60G 17/033 takes precedence) **[5]**

17/033 • • characterised by regulating means acting on more than one spring **[5]**

17/04 • • Fluid-spring characteristics

17/044 • • • Self-pumping fluid springs (pumps for liquids F04) **[5]**

17/048 • • • with the regulating means inside the fluid springs (B60G 17/044 takes precedence) **[5]**

17/052 • • • Pneumatic spring characteristics (B60G 17/048 takes precedence) **[5]**

17/056 • • • Regulating distributors or valves (B60G 17/044-B60G 17/048 take precedence) **[5]**

17/06 • Characteristics of dampers (B60G 17/015 takes precedence) **[5]**

17/08 • • Characteristics of fluid dampers (adjusting fluid dampers in general F16F 9/44-F16F 9/53)

21/00 Interconnection systems for two or more resiliently-suspended wheels, e.g. for stabilising a vehicle body with respect to acceleration, deceleration or centrifugal forces (B60G 17/033 takes precedence; steering deflectable wheels combined with means for inwardly inclining the vehicle body on bends B62D 9/02) **[5]**

21/02 • permanently interconnected

21/04 • • mechanically

21/045 • • • between wheels on different axles on the same side of the vehicle, i.e. the left or the right side **[5]**

21/05 • • • between wheels on the same axle but on different sides of the vehicle, i.e. the left and right wheel suspensions being interconnected **[5]**

21/055 • • • • Stabiliser bars **[5]**

21/06 • • fluid

21/067 • • • between wheels on different axles on the same side of the vehicle, i.e. the left or the right side **[5]**

21/073 • • • between wheels on the same axle but on different sides of the vehicle, i.e. the left and right wheel suspensions being interconnected **[5]**

21/08 • characterised by use of gyroscopes (gyroscopes for stabilising vehicle bodies without controlling suspension arrangements B62D 37/06) **[4, 5]**

21/10 • not permanently interconnected, e.g. operative only on acceleration, only on deceleration, or only at off-straight position of steering

23/00 Wheel suspensions with automatic means for sensing unevenness ahead of wheels or for moving wheels up or down in accordance therewith

99/00 Subject matter not provided for in other groups of this subclass [2010.01]