

# CPC COOPERATIVE PATENT CLASSIFICATION

## B PERFORMING OPERATIONS; TRANSPORTING

(NOTES omitted)

### TRANSPORTING

#### B60 VEHICLES IN GENERAL

(NOTE omitted)

#### B60N SEATS SPECIALLY ADAPTED FOR VEHICLES; VEHICLE PASSENGER ACCOMMODATION NOT OTHERWISE PROVIDED FOR

##### NOTES

- Attention is drawn to the Note following the class title [B60](#)
- {In this subclass the following term is used with the meaning indicated:
  - "cushion": seating part of a seat distinguished from the back-rest}
- {In this subclass, it is desirable to add the indexing codes [B60N 2210/00](#) - [B60N 2210/50](#), [B60N 2220/00](#) - [B60N 2220/30](#) and [B60N 2230/00](#) - [B60N 2230/30](#) with the exception of groups [B60N 2/0021](#) and [B60N 2/0035](#), where the allocation of the indexing codes is mandatory in accordance with their note}

<p><b>2/00</b>    <b>Seats specially adapted for vehicles; Arrangement or mounting of seats in vehicles</b> (<a href="#">railway seats B61D 33/00</a>; <a href="#">cycle seats B62J 1/00</a>; <a href="#">aircraft seats B64D 11/06</a>, <a href="#">B64D 25/04</a>, <a href="#">B64D 25/10</a>)</p> <p>2/002    . {Seats provided with an occupancy detection means mounted therein or thereon (<a href="#">detection means responsive to presence or absence of children B60N 2/266</a>)}</p> <p>2/0021    . . {characterised by the type of sensor or measurement}</p> <p style="padding-left: 20px;"><b>NOTE</b></p> <p style="padding-left: 40px;">{In this group, it is mandatory to add the indexing codes of groups <a href="#">B60N 2210/00</a> - <a href="#">B60N 2210/50</a>}</p> <p>2/0022    . . . {for sensing anthropometric parameters, e.g. heart rate or body temperature}</p> <p>2/0023    . . . {for detection of driver fatigue}</p> <p>2/0024    . . . {for identifying, categorising or investigation of the occupant or object on the seat}</p> <p>2/0025    . . . . {by using weight measurement}</p> <p>2/0026    . . . . {for distinguishing between humans, animals or objects}</p> <p>2/0027    . . . . {for detecting the position of the occupant or of occupant's body part}</p> <p>2/0028    . . . . . {of a body part, e.g. of an arm or a leg}</p> <p>2/0029    . . . . {for detecting the motion of the occupant}</p> <p>2/003    . . . {characterised by the sensor mounting location in or on the seat}</p> <p>2/0031    . . . . {mounted on the frame}</p> <p>2/0032    . . . . {mounted on springs}</p> <p>2/0033    . . . . {mounted on or in the foam cushion}</p> <p>2/0034    . . . . {in, under or on the seat cover}</p>	<p>2/0035    . . . {characterised by the sensor data transmission, e.g. wired connections or wireless transmitters therefor; characterised by the sensor data processing, e.g. seat sensor signal amplification or electric circuits for providing seat sensor information}</p> <p style="padding-left: 20px;"><b>NOTE</b></p> <p style="padding-left: 40px;">{In this group, it is mandatory to add the indexing codes of groups <a href="#">B60N 2220/00</a> - <a href="#">B60N 2220/30</a> and <a href="#">B60N 2230/00</a> - <a href="#">B60N 2230/30</a>}</p> <p>2/005    . Arrangement or mounting of seats in vehicles {, e.g. dismantable auxiliary seats} (<a href="#">B60N 2/02</a> takes precedence {; for railway vehicles <a href="#">B61D 1/04</a>})</p> <p>2002/0055    . . {characterised by special measures to ensure that no seat or seat part collides, during its movement, with other seats, seat parts or the vehicle itself}</p> <p>2/01    . . Arrangement of seats relative to one another</p> <p>2/012    . . . {The seat support being a part of the vehicle body or chassis}</p> <p>2/015    . . Attaching seats directly to vehicle chassis</p> <p>2/01508    . . . {using quick release attachments}</p> <p>2/01516    . . . . {with locking mechanisms}</p> <p>2/01525    . . . . . {with locking elements expanding inside or under the vehicle floor or rail}</p> <p>2/01533    . . . . . {using balls interlocking with notches}</p> <p>2/01541    . . . . . {using moving hooks (<a href="#">B60N 2/01583</a> takes precedence)}</p> <p>2/0155    . . . . . {with the locking mechanism on the vehicle floor or rail}</p> <p>2/01558    . . . . . {with key and slot}</p> <p>2/01566    . . . . . {key rotating about a vertical axis}</p> <p>2/01575    . . . . . {key sliding inside the vehicle floor or rail}</p> <p>2/01583    . . . . . {locking on transversal elements on the vehicle floor or rail, e.g. transversal rods}</p> <p>2/01591    . . . . {with wheels coupled to the seat}</p>
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- 2/02 . . . the seat or part thereof being movable, e.g. adjustable ([adjustable arm-rests B60N 2/75](#); [adjustable head-rests B60N 2/806](#))
- 2002/0204 . . . {characterised by the seat or seat part turning about or moving along a non-standard, particular axis, i.e. an axis different from the axis characterising the conventional movement}
- 2002/0208 . . . {the seat or seat part turning about or moving along an inclined axis}
- 2002/0212 . . . {the seat or seat part turning about or moving along a longitudinal axis}
- 2002/0216 . . . {the seat or seat part turning about or moving along a transversal axis}
- 2002/022 . . . {the seat or seat part turning about or moving along a vertical axis}
- 2/0224 . . . {Non-manual adjustments, e.g. with electrical operation}
- 2/02246 . . . {Electric motors therefor}
- 2/02253 . . . . {characterised by the transmission between the electric motor and the seat or seat parts}
- 2/02258 . . . . {characterised by the mounting of the electric motor for adjusting the seat}
- 2/0226 . . . {User interfaces specially adapted for seat adjustment}
- 2/0228 . . . . {Hand-activated mechanical switches ([B60N 2/0229 takes precedence](#))}
- 2/0229 . . . . {characterised by the shape, e.g. switches having cushion or backrest shape}
- 2/0231 . . . . {concealed interfaces, e.g. hidden below seat cover}
- 2/0233 . . . . {Touchscreens}
- 2/0235 . . . . {Joysticks}
- 2/0237 . . . . {using portable terminals, e.g. smartphones}
- 2/0239 . . . . {using movement detection or gesture recognition}
- 2/0241 . . . . {using augmented or virtual reality}
- 2/0244 . . . {with logic circuits}
- 2/0248 . . . . {with memory of positions}
- 2/0252 . . . . {with relations between different adjustments, e.g. height of headrest following longitudinal position of seat}
- 2/0256 . . . . {Arrangements for facilitating the occupant to get in or out of the vehicle, e.g. stowing a seat forward}
- 2/026 . . . . {varying hardness or support of upholstery, e.g. for tuning seat comfort when driving curved roads}
- 2/0264 . . . . {characterised by the type of electrical connection, e.g. wiring, plugs or USB}
- 2/0268 . . . . {using sensors or detectors for adapting the seat or seat part, e.g. to the position of an occupant}
- 2/0272 . . . . {using sensors or detectors for detecting the position of seat parts}
- 2/0273 . . . . {taking into account user data, e.g. knee height or physical state}
- 2/0274 . . . . {movement of the seat following a virtual reality simulation}
- 2/0276 . . . . {reaction to emergency situations, e.g. crash}
- 2/0277 . . . . {characterised by the calculation method or calculation flow chart of sensor data for adjusting the seat}
- 2/0278 . . . . {using sensors external to the seat for measurements in relation to the seat adjustment, e.g. for identifying the presence of obstacles or the appropriateness of the occupants position}
- 2/0279 . . . . . {for detecting objects outside the vehicle, e.g. for user identification}
- 2/028 . . . {Elastically mounted back-rests}
- 2/0284 . . . {Adjustable seat-cushion length ([B60N 2/0224 takes precedence](#))}
- 2002/0288 . . . {Adjustable seat width}
- 2/0292 . . . {Multiple configuration seats, e.g. for spacious vehicles or mini-buses}
- 2/0296 . . . {Central command actuator to selectively switch on or engage one of several special purpose circuits or mechanisms}
- 2/04 . . . the whole seat being movable
- 2/045 . . . . {Longitudinal adjustment by means of articulated rods supporting the seat, e.g. parallelogram mechanisms ([B60N 2/38 takes precedence](#))}
- 2/06 . . . . slidable ([B60N 2/12](#) {, [B60N 2/2209](#)} take precedence)
- 2/062 . . . . . {transversally slidable}
- 2/065 . . . . . {Rear seats}
- 2/067 . . . . . {by linear actuators, e.g. linear screw mechanisms}
- 2/07 . . . . . Slide construction
- 2/0702 . . . . . . {characterised by its cross-section}
- 2/0705 . . . . . . . {omega-shaped}
- 2/0707 . . . . . . . {J-shaped}
- 2/071 . . . . . . . {T-shaped}
- 2/0712 . . . . . . . {H or double T-shaped}
- 2/0715 . . . . . . . {C or U-shaped}
- 2/0717 . . . . . . . {Rounded, e.g. circular}
- 2/072 . . . . . . . {Complex cross-section, e.g. obtained by extrusion}
- 2/0722 . . . . . . . {Constructive details}
- 2/0725 . . . . . . . {Closing members for covering the slide}
- 2/0727 . . . . . . . {Stop members for limiting sliding movement}
- 2/073 . . . . . . . {Reinforcement members preventing slide dislocation}
- 2/0732 . . . . . . . {Attachment of seat frame to the slide, e.g. eyelets}
- 2/0735 . . . . . . . {Position and orientation of the slide as a whole}
- 2/0737 . . . . . . . {the slide path being substantially in a direction different from the longitudinal}
- 2/074 . . . . . . . . {rotated about the transversal axis}
- 2/0742 . . . . . . . . {rotated about the vertical axis}
- 2/0745 . . . . . . . . {the slide path being curved}
- 2/0747 . . . . . . . . {the opening of the cross section being oriented in a direction different from the vertical, e.g. transversal}
- 2/075 . . . . . . . . . roller-less
- 2/08 . . . . . characterised by the locking device
- 2/0806 . . . . . . {with pin alignment systems, e.g. with at least one of a plurality of locking pins always aligned w.r.t. at least one of a plurality of pin-receiving elements}
- 2/0812 . . . . . . . {Location of the latch}

2/0818	. . . . . {inside the rail}	2/1835	. . . . . {pivoting about an axis located in the front}
2/0825	. . . . . {outside the rail}	2/1839	. . . . . {pivoting about an axis located in an intermediate position}
2/0831	. . . . . {Movement of the latch}	2/1842	. . . . . {pivoting about an axis located in the rear}
2/0837	. . . . . {pivoting}	2/1846	. . . . . {pivoting about a distant axis, e.g. virtual}
2/0843	. . . . . {about a longitudinal axis}	2/185	. . . . . {characterised by the drive mechanism}
2/085	. . . . . {about a transversal axis}	2/1853	. . . . . {Linear actuator, e.g. screw mechanism}
2/0856	. . . . . {about a vertical axis}	2/1857	. . . . . {Eccentric mechanism}
2/0862	. . . . . {sliding}	2/186	. . . . . {with a transversal pin displaced by a moving slot or a cam along a predetermined path}
2/0868	. . . . . {in a transversal direction}	2/1864	. . . . . {Gear wheel driven mechanism}
2/0875	. . . . . {in a vertical direction}	2/1867	. . . . . {Cycloidal or planetary mechanism}
2/0881	. . . . . {Activation of the latches by the control mechanism}	2/1871	. . . . . {Worm and worm gear articulations}
2/0887	. . . . . {with synchronised movements}	2/1875	. . . . . {Racks}
2/0893	. . . . . {allowing independent movement of the latches, e.g. to recover tolerance errors}	2/1878	. . . . . {Hydraulic or pneumatic actuation}
2/10	. . . . . tiltable ( <a href="#">B60N 2/12</a> {, <a href="#">B60N 2/2875</a> } take precedence)	2/1882	. . . . . {Ratchet mechanism}
2/12	. . . . . slidable and tiltable	2/1885	. . . . . {with weight compensating means}
2/123	. . . . . {and provided with memory locks}	2/1889	. . . . . {and provided with braking systems}
2002/126	. . . . . {the backrest being maintained in its tilted position until the seat has slid to its memorised position}	2/1892	. . . . . {characterised by a lock}
2/14	. . . . . rotatable, e.g. to permit easy access ( <a href="#">B60N 2/10</a> {, <a href="#">B60N 2/2869</a> } take precedence)	2/1896	. . . . . {Stepwise movement mechanisms, e.g. ratchets ( <a href="#">B60N 2/1882</a> takes precedence)}
2/143	. . . . . {taking a position opposite to the original one}	2/20	. . . . . the back-rest being tiltable, e.g. to permit easy access ( <a href="#">B60N 2/04</a> , <a href="#">B60N 2/22</a> {, <a href="#">B60N 2/3002</a> } take precedence)
2/146	. . . . . {characterised by the locking device}	2/203	. . . . . {taking a position opposite to the original one}
2/16	. . . . . height-adjustable	2/206	. . . . . {to a position in which it can be used as a support for objects, e.g. as a tray}
2/1605	. . . . . {characterised by the cinematic}	2/22	. . . . . the back-rest being adjustable ( <a href="#">B60N 2/2878</a> takes precedence)}
2/161	. . . . . {Rods}	2002/2204	. . . . . {Adjustable back-rest height or length}
2/1615	. . . . . {Parallelogram-like structure}	2/2209	. . . . . {by longitudinal displacement of the cushion, e.g. back-rest hinged on the bottom to the cushion and linked on the top to the vehicle frame}
2/162	. . . . . {Scissors-like structure}	2/2213	. . . . . {Gear wheel driven mechanism ( <a href="#">B60N 2/2231</a> , <a href="#">B60N 2/225</a> take precedence)}
2/1625	. . . . . {Combination of rods and slides}	2/2218	. . . . . {Transversally moving locks}
2/163	. . . . . {Slides only}	2/2222	. . . . . {the back-rest having two or more parts}
2/1635	. . . . . {characterised by the drive mechanism}	2/2227	. . . . . {and provided with braking systems}
2/164	. . . . . {Linear actuator, e.g. screw mechanism}	2/2231	. . . . . {Worm and worm gear articulations}
2/1645	. . . . . {Eccentric mechanism}	2/2236	. . . . . {with a transversal pin displaced by a slot or a cam along a predetermined path}
2/165	. . . . . {Gear wheel driven mechanism}	2/224	. . . . . {Stepwise movement mechanisms, e.g. ratchets}
2/1655	. . . . . {Cycloidal or planetary mechanism}	2/2245	. . . . . {provided with a lock mechanism on the upper part of the back-rest}
2/166	. . . . . {Worm and worm gear articulations}	2/225	. . . . . by cycloidal or planetary mechanisms
2/1665	. . . . . {Hydraulic or pneumatic actuation}	2/2251	. . . . . {with gears having orbital motion, e.g. sun and planet gears}
2/167	. . . . . {Ratchet mechanism}	2/2252	. . . . . {in which the central axis of the gearing lies inside the periphery of an orbital gear, e.g. one gear without sun gear}
2/1675	. . . . . {with weight compensating means}	2/2254	. . . . . {provided with braking systems}
2/168	. . . . . {and provided with braking systems}	2/2255	. . . . . {with coiled springs}
2/1685	. . . . . {characterised by a lock}	2/2257	. . . . . {with rollers or balls}
2/169	. . . . . {Stepwise movement mechanisms, e.g. ratchets ( <a href="#">B60N 2/167</a> takes precedence)}	2/2258	. . . . . {with ratchets}
2/1695	. . . . . {with simultaneous height and inclination adjustment}	2/23	. . . . . by {linear actuators, e.g.} linear screw mechanisms
2/18	. . . . . the front or the rear portion of the seat being adjustable, e.g. independently of each other	2/231	. . . . . {by hydraulic actuators}
2/1803	. . . . . {with independent front and/or rear adjustment}		
2/1807	. . . . . {characterised by the cinematic}		
2/181	. . . . . {Rods}		
2/1814	. . . . . {Parallelogram-like structure}		
2/1817	. . . . . {Scissors-like structure}		
2/1821	. . . . . {Combination of Rods and slides}		
2/1825	. . . . . {including a curved slide}		
2/1828	. . . . . {Slides only}		
2/1832	. . . . . {including a curved slide}		

2/232	. . . . {provided with memory locks}	2/2842	. . . . {adapted to carry the child, when dismounted from the vehicle}
2/233	. . . . {by linear screw mechanisms}	2/2845	. . . . . {having handles}
2/235	. . . by gear-pawl type mechanisms	2/2848	. . . . . {being convertible or adaptable to a preambulator, e.g. a baby-carriage or a push-chair}
2/2352	. . . . . {with external pawls}	2/2851	. . . . . {provided with head-rests}
2/2354	. . . . . {and provided with memory locks}	2/2854	. . . . . {Children's cots; Hammocks}
2/2356	. . . . . {with internal pawls}	2/2857	. . . . . {characterised by the peculiar orientation of the child (B60N 2/2869 takes precedence)}
2/2358	. . . . . {and provided with memory locks}	2/286	. . . . . {forward facing (B60N 2/2866 takes precedence)}
2/236	. . . . . {linearly movable}	2/2863	. . . . . {backward facing}
2/2362	. . . . . {rotatably movable}	2/2866	. . . . . {booster cushions, e.g. to lift a child to allow proper use of the conventional safety belts}
2/24	. for particular purposes or particular vehicles	2/2869	. . . . . {rotatable about a vertical axis}
2/242	. . {Bus seats}	2/2872	. . . . . {provided with side rests}
2/245	. . {for handicapped persons}	2/2875	. . . . . {inclinal, as a whole or partially}
2002/247	. . {to support passengers in a half-standing position}	2/2878	. . . . . {the back-rest being inclinable}
2/26	. . for children (B60N 2/30 takes precedence)	2/2881	. . . . . {Upholstery, padded or cushioned members therefor}
2/265	. . . {Adaptations for seat belts}	2/2884	. . . . . {with protection systems against abnormal g-forces}
2/266	. . . {with detection or alerting means responsive to presence or absence of children; with detection or alerting means responsive to improper locking or installation of the child seats or parts thereof}	2/2887	. . . . . {Fixation to a transversal anchorage bar, e.g. isofix}
2/267	. . . . . {alerting means responsive to presence or absence of children}	2/289	. . . . . {coupled to the vehicle frame}
2/268	. . . . . {detecting or alerting means responsive to the installation of the child seats in the vehicle}	2/2893	. . . . . {coupled to the seat sub-frame}
2/269	. . . . . {detecting or alerting means responsive to the Isofix locking on the child seat or vehicle}	2002/2896	. . . . . {the child seat being foldable, e.g. to facilitate transport}
2/271	. . . . . {detecting or alerting means responsive to securing the child in the seat}	2/30	. . Non-dismountable {or dismountable} seats storable in a non-use position, e.g. foldable spare seats
2/272	. . . . . {Buckle lock sensors for child seat safety belts}	2/3002	. . . {back-rest movements}
2/273	. . . {with detection or alerting means responsive to crashes}	2/3004	. . . . . {by rotation only}
2/274	. . . {characterised by the communication means between the child seat and another entity, e.g. vehicle or portable device}	2/3006	. . . . . {about longitudinal axis}
2/28	. . . Seats readily mountable on, and dismountable from, existing seats {or other parts} of the vehicle	2/3009	. . . . . {about transversal axis}
2/2803	. . . . . {Adaptations for seat belts}	2/3011	. . . . . {the back-rest being hinged on the cushion, e.g. "portefeuille movement"}
2/2806	. . . . . {for securing the child seat to the vehicle}	2/3013	. . . . . {the back-rest being hinged on the vehicle frame}
2/2809	. . . . . {with additional tether connected to the top of the child seat and passing above the top of the back-rest}	2/3015	. . . . . {the axis being located at the top of the back-rest}
2/2812	. . . . . {for securing the child to the child seat}	2/3018	. . . . . {about vertical axis}
2/2816	. . . . . {with additional belt accessories, e.g. belt tension detectors}	2/302	. . . . . {by translation only}
2/2818	. . . . . {characterised by guiding means for children belts}	2/3022	. . . . . {along longitudinal axis}
2/2821	. . . . . {having a seat and a base part}	2/3025	. . . . . {along transversal axis}
2/2824	. . . . . {part of the base being supported by the vehicle frame (B60N 2/289 takes precedence)}	2/3027	. . . . . {along vertical axis}
2/2827	. . . . . {part of the base being supported by the seat sub-frame (B60N 2/2893 takes precedence)}	2/3029	. . . . . {by composed movement}
2/283	. . . . . {suspended}	2/3031	. . . . . {in a longitudinal-vertical plane}
2/2833	. . . . . {back-rest suspended}	2/3034	. . . . . {in a longitudinal-transversal plane}
2/2836	. . . . . {window-frame suspended}	2/3036	. . . . . {in a transversal-vertical plane}
2/2839	. . . . . {having a front guard or barrier}	2/3038	. . . {Cushion movements}
		2/304	. . . . . {by rotation only}
		2/3043	. . . . . {about longitudinal axis}
		2/3045	. . . . . {about transversal axis}
		2/3047	. . . . . {the cushion being hinged at the back-rest}
		2/305	. . . . . {the cushion being hinged on the vehicle frame}
		2/3052	. . . . . {about vertical axis}
		2/3054	. . . . . {by translation only}
		2/3056	. . . . . {along longitudinal axis}
		2/3059	. . . . . {along transversal axis}

2/3061	. . . . . {along vertical axis}	2/42754	. . . . . {of the cushion}
2/3063	. . . . . {by composed movement}	2/42763	. . . . . {with anti-submarining systems}
2/3065	. . . . . {in a longitudinal-vertical plane}	2/42772	. . . . . {characterised by the triggering system}
2/3068	. . . . . {in a longitudinal-transversal plane}	2/42781	. . . . . {mechanical triggering}
2/307	. . . . . {in a transversal-vertical plane}	2/4279	. . . . . {electric or electronic triggering}
2/3072	. . . {on a lower level of a multi-level vehicle floor}	2/43	. . . {Safety locks (for back-rests <a href="#">B60N 2/433</a> )}
2/3075	. . . . . {stowed in recess ( <a href="#">B60N 2/3079</a> takes precedence)}	2/433	. . . Safety locks for back-rests, e.g. with locking bars activated by inertia
2/3077	. . . . . {stowed in the luggage compartment}	2/50	. Seat suspension devices
2/3079	. . . . . {in a recess}	2/501	. . {actively controlled suspension, e.g. electronic control}
2/3081	. . . {Seats convertible into parts of the seat cushion or the back-rest or disappearing therein, e.g. for children}	2/502	. . {attached to the base of the seat ( <a href="#">B60N 2/504</a> takes precedence)}
2/3084	. . . . . {Disappearing in a recess of the back-rest}	2/503	. . {attached to the backrest ( <a href="#">B60N 2/504</a> takes precedence)}
2/3086	. . . . . {Disappearing in a recess of the cushion}	2/504	. . {attached to the base and the backrest}
2/3088	. . . {characterised by the mechanical link}	2/505	. . {Adjustable suspension including height adjustment}
2/309	. . . . . {rods}	2/506	. . {Seat guided by rods}
2/3093	. . . . . {slides}	2/507	. . . {Parallelogram-like structure}
2/3095	. . . {Auxiliary rear seats accessible from outside the vehicle when in an in-use position}	2/508	. . . {Scissors-like structure}
2/3097	. . . {Dismountable seats storable in a non-use position ( <a href="#">B60N 2/015</a> , <a href="#">B60N 2/28</a> take precedence)}	2/509	. . {Seat guided by slides or the like}
2/32	. . convertible for other use	2/52	. . using fluid means
2/34	. . . into a bed	2/522	. . . {characterised by dampening means}
2/345	. . . . . {by adding parts}	2/525	. . . {using gas}
2/36	. . . into a loading platform ( <a href="#">B60N 2/065</a> takes precedence)}	2/527	. . . {using liquids}
2002/363	. . . . . {characterised by provisions for enhancing the cargo floor surface, e.g. elements closing gaps or enlarging the back-rest surface}	2/54	. . using mechanical springs
2/366	. . . . . {characterised by the locking device}	2/542	. . . {made of rubber or other material having high internal friction, e.g. polymers}
2/38	. . specially constructed for use on tractors or like off-road vehicles	2/544	. . . {Compression or tension springs ( <a href="#">B60N 2/542</a> takes precedence)}
2/39	. . . Seats tiltable to compensate for roll inclination of vehicles	2/546	. . . {Leaf- or flexion springs}
2/40	. . . saddle type	2/548	. . . {Torsion springs, e.g. torsion helicoidal springs}
2/42	. . the seat constructed to protect the occupant from the effect of abnormal g-forces, e.g. crash or safety seats (for protecting children <a href="#">B60N 2/26</a> ; arm-rests <a href="#">B60N 2/75</a> ; head-rests <a href="#">B60N 2/888</a> )	2/56	. Heating or ventilating devices
2/4207	. . . {characterised by the direction of the g-forces}	2/5607	. . {characterised by convection}
2/4214	. . . . . {longitudinal}	2/5614	. . . {by liquid}
2/4221	. . . . . {due to impact coming from the front}	2/5621	. . . {by air}
2/4228	. . . . . {due to impact coming from the rear}	2/5628	. . . . . {coming from the vehicle ventilation system, e.g. air-conditioning system}
2/4235	. . . . . {transversal}	2/5635	. . . . . {coming from the passenger compartment}
2/4242	. . . . . {vertical}	2/5642	. . . . . {with circulation of air through a layer inside the seat}
2/4249	. . . {fixed structures, i.e. where neither the seat nor a part thereof are displaced during a crash}	2/565	. . . . . {sucked from the seat surface}
2/4256	. . . . . {the shape of the seat being specially adapted for a particular purpose or for particular vehicles}	2/5657	. . . . . {blown towards the seat surface}
2/4263	. . . . . {with anti-submarining systems}	2/5664	. . . . . {with unforced air circulation, i.e. not using a fan or the like}
2/427	. . . Seats or parts thereof displaced during a crash	2/5671	. . . . . {forming a windbreak, e.g. warm air blown on the neck of the passenger of an open vehicle}
2/42709	. . . . . {involving residual deformation or fracture of the structure}	2/5678	. . . {characterised by electrical systems}
2/42718	. . . . . {with anti-submarining systems}	2/5685	. . . {Resistance}
2/42727	. . . . . {involving substantially rigid displacement}	2/5692	. . . {Refrigerating means}
2/42736	. . . . . {of the whole seat}	2/58	. Seat coverings
2/42745	. . . . . {of the back-rest ( <a href="#">B60N 2/433</a> takes precedence; higher part of the back-rest moving together with the headrest <a href="#">B60N 2/888</a> )}	2002/5808	. . {comprising opening zones for airbags}
		2/5816	. . {attachments thereof}
		2/5825	. . . {by hooks, staples, clips, snap fasteners or the like}
		2/5833	. . . {by hook-and-loop type fasteners}
		2/5841	. . . {by clamping means}
		2/585	. . . {by buckle passages}
		2/5858	. . . {by elastic means}

- 2/5866 . . . {by thermal welding}
- 2/5875 . . . {by adhesion, e.g. gluing}
- 2/5883 . . . {by sewing, stitching or threading}
- 2/5891 . . {characterised by the manufacturing process; manufacturing seat coverings not otherwise provided for}
- 2/60 . . Removable protective coverings
- 2/6009 . . . {covering more than only the seat}
- 2/6018 . . . {attachments thereof}
- 2/6027 . . . . {by hooks, staples, clips, snap fasteners or the like}
- 2/6036 . . . . {by hook and loop-type fasteners}
- 2/6045 . . . . {by clamping means}
- 2/6054 . . . . {by buckle passages}
- 2/6063 . . . . {by elastic means}
- 2/6072 . . . . {by thermal welding}
- 2/6081 . . . . {by adhesion, e.g. glueing}
- 2/609 . . . . {by sewing, stitching or threading}
- 2/62 . . Thigh-rests {[\(B60N 2/914 takes precedence\)](#)}
- 2/64 . . Back-rests {or cushions [\(B60N 2/222 takes precedence\)](#)}
- 2/643 . . {shape of the back-rests [\(B60N 2/66 takes precedence\)](#)}
- 2/646 . . {shape of the cushion}
- 2/66 . . Lumbar supports
- 2/663 . . . {portable with attachment to the back-rest}
- 2/665 . . . {using inflatable bladders}
- 2/666 . . . {vertically adjustable}
- 2/667 . . . {having flexible support member bowed by applied forces}
- 2/6671 . . . . {with cable actuators}
- 2/6673 . . . . {with motor driven adjustments}
- 2/68 . . Seat frames
- 2/682 . . {Joining means}
- 2002/684 . . . {the back rest being mounted or joined with an easy attachment system to the seat}
- 2/686 . . {Panel like structures}
- 2/688 . . {Particular seat belt attachment and guiding}
- 2/70 . . Upholstery springs {; Upholstery}
- 2/7005 . . {detachable}
- 2/7011 . . {of substantially two-dimensional shape, e.g. hammock-like, plastic shells, fabrics}
- 2/7017 . . {characterised by the manufacturing process; manufacturing upholstery or upholstery springs not otherwise provided for}
- 2/7023 . . {Coach-like constructions}
- 2/7029 . . . {back-rests}
- 2/7035 . . . {Cushions}
- 2/7041 . . . . {Fixation of covers and springs}
- 2/7047 . . . . {Springs}
- 2/7052 . . . . . {Springs using a combination of metal and rubber}
- 2/7058 . . . . . {Metallic springs}
- 2/7064 . . . . . {helicoidal}
- 2/707 . . . . . {with rubber blocks}
- 2/7076 . . . . . {with rubber bands}
- 2/7082 . . . . . {with air or fluid cushions [\(B60N 2/914 takes precedence\)](#)}
- 2/7088 . . . . . {with valves [\(B60N 2/914 takes precedence\)](#)}
- 2/7094 . . {Upholstery springs}
- 2/72 . . Attachment or adjustment thereof
- 2/75 . . Arm-rests
- 2/753 . . . {movable to an inoperative position}
- 2/757 . . . . {in a recess of the back-rest}
- 2/76 . . . . {in a recess of the cushion}
- 2/763 . . . {adjustable}
- 2/767 . . . . {Angle adjustment}
- 2/77 . . . . {Height adjustment}
- 2/773 . . . . {Longitudinal adjustment}
- 2/777 . . . . {Transversal adjustment}
- 2/78 . . . {post or panel mounted}
- 2/783 . . . . {sill suspended, e.g. window sill}
- 2/787 . . . {detachable}
- 2/79 . . . {Adaptations for additional use of the arm-rests}
- 2/793 . . . . {for use as storage compartments}
- 2/797 . . . . {for use as electrical control means, e.g. switches}
- 2/80 . . Head-rests
- 2/803 . . fixed
- 2/806 . . movable or adjustable
- 2/809 . . . vertically slidable
- 2/812 . . . . characterised by their locking devices
- 2/815 . . . . . Release mechanisms, e.g. buttons
- 2/818 . . . . . with stepwise positioning
- 2/821 . . . . . with continuous positioning
- 2/824 . . . . . . using springs
- 2/826 . . . . . . using rubber-type material
- 2/829 . . . . . characterised by their adjusting mechanisms, e.g. electric motors
- 2/832 . . . . . movable to an inoperative or stowed position
- 2/835 . . . . . specially adapted for rear seats
- 2/838 . . . Tiltable
- 2/841 . . . . characterised by their locking devices
- 2/844 . . . . . Release mechanisms, e.g. buttons
- 2/847 . . . . . with stepwise positioning
- 2/85 . . . . . with continuous positioning
- 2/853 . . . . . characterised by their adjusting mechanisms, e.g. electric motors
- 2/856 . . . . . movable to an inoperative or stowed position
- 2/859 . . . . . specially adapted for rear seats
- 2/862 . . . . . with means for maintaining a desired position when the seat-back is adjusted, e.g. parallelogram mechanisms
- 2/865 . . . providing a fore-and-aft movement with respect to the occupant's head
- 2/868 . . . providing a lateral movement parallel to the occupant's shoulder line
- 2/874 . . . movable to an inoperative or stowed position [\(B60N 2/832, B60N 2/856 take precedence\)](#)
- 2/876 . . . . specially adapted for rear seats [\(B60N 2/835, B60N 2/859 take precedence\)](#)
- 2/879 . . . with additional features not related to head-rest positioning, e.g. heating or cooling devices or loudspeakers
- 2/882 . . detachable
- 2/885 . . provided with side-rests
- 2/888 . . with arrangements for protecting against abnormal g-forces, e.g. by displacement of the head-rest
- 2/891 . . with the head-rest being comma-shaped in side view
- 2/894 . . with rods solidly attached to the back-rest
- 2/897 . . with sleeves located in the back-rest for guiding the rods of the head-rest

## B60N

- 2002/899 . . {characterised by structural or mechanical details not otherwise provided for}
  - 2/90 . Details or parts not otherwise provided for
  - 2002/905 . . {the head-rest or seat used as an anchorage point, for an object not covered by groups in [B60N](#), e.g. for a canvas}
  - 2/91 . . {Panels between front seats}
  - 2/914 . . {Hydro-pneumatic adjustments of the shape}
  - 2/919 . . {Positioning and locking mechanisms ([B60N 2/16](#), [B60N 2/18](#), [B60N 2/22](#), [B60N 2/225](#) take precedence)}
  - 2002/924 . . . {using electric or hydraulic energy}
  - 2/929 . . . {linear}
  - 2/933 . . . {rotatable}
  - 2/938 . . . . {and provided with braking systems}
  - 2/943 . . . . {Stepwise movement mechanisms, e.g. ratchets}
  - 2002/948 . . . {the actuation of the positioning or locking mechanism for one seat part being dependent on the position of another seat part, e.g. the seats floor lock being unlocked when the back-rest is inclined or the backrest can be tilted only when the seat is in its rear position}
  - 2002/952 . . . {characterised by details of the locking system}
  - 2002/957 . . . . {the locking system prevents an abnormal or wrong mounting situation, i.e. deployment or functioning of a seat part being prevented if the seat or seat part is not properly mounted}
  - 2002/962 . . . . . {the locking system disabling tilting of the back-rest to the vertical position, when the seat is not properly installed}
  - 2002/967 . . . . . {the locking system prevents tilt of whole seat by retaining and locking the seat in a vertical storage position}
  - 2002/971 . . . . . {the locking system being an element distinct from articulation means, retaining the seat or seat part in its folded position, e.g. controlled by a wire}
  - 2/976 . . {massaging systems}
  - 2002/981 . . {Warning systems, e.g. the seat or seat parts vibrates to warn the passenger when facing a danger}
  - 2/986 . . {Side-rests ([B60N 2/2872](#), [B60N 2/885](#) take precedence)}
  - 2/99 . . . {adjustable}
  - 2/995 . . {Lower-leg-rests, e.g. calf-rests}
  - 3/00 Arrangements or adaptations of other passenger fittings, not otherwise provided for (of radio sets, television sets, telephones, {stowing or holding appliances} , safety belts or the like [B60R](#))**
    - 3/001 . {of tables or trays}
    - 3/002 . . {of trays}
    - 3/004 . . . {of foldable trays mounted on the back-rest}
    - 3/005 . . . {mounted on the steering wheel}
    - 3/007 . . . {mounted on the window sill}
    - 3/008 . {of beds}
    - 3/02 . of hand grips or straps
    - 3/023 . . {movable}
    - 3/026 . . {characterised by the fixing means ([B60N 3/023](#) takes precedence)}
    - 3/04 . of floor mats {or carpets}
    - 3/042 . . {of carpets ([B60N 3/046](#), [B60N 3/048](#) take precedence)}
  - 3/044 . . {of removable mats ([B60N 3/046](#), [B60N 3/048](#) take precedence)}
  - 3/046 . . {characterised by the fixing means}
  - 3/048 . . {characterised by their structure}
  - 3/06 . of footrests
  - 3/063 . . {with adjustment systems}
  - 3/066 . . {with protection systems against abnormal g-forces}
  - 3/08 . of receptacles for refuse, e.g. ash-trays
  - 3/083 . . {Ash-trays}
  - 3/086 . . . {with refuse evacuation means}
  - 3/10 . of receptacles for food or beverages, e.g. refrigerated
  - 3/101 . . {fixed}
  - 3/102 . . {storable or foldable in a non-use position}
  - 3/103 . . {detachable}
  - 3/104 . . {with refrigerating or warming systems}
  - 3/105 . . {for receptacles of different size or shape}
  - 3/106 . . . {with adjustable clamping mechanisms}
  - 3/107 . . . {with different elements of fixed geometry}
  - 3/108 . . . {with resilient holding elements}
  - 3/12 . of receptacles for cigarettes or the like
  - 3/14 . of electrically-heated lighters
  - 3/16 . of cooking or boiling devices
  - 3/18 . of drinking-water {or other beverage} dispensing devices
  - 5/00 Arrangements or devices on vehicles for entrance or exit control of passengers, e.g. turnstiles**
  - 99/00 Subject matter not provided for in other groups of this subclass**
- Indexing scheme associated with groups [B60N 2/00](#) - [B60N 99/00](#) relating to general mechanical or structural details**
- 2205/00 General mechanical or structural details**
  - 2205/20 . Measures for elimination or compensation of play or backlash
  - 2205/30 . Seat or seat parts characterised by comprising plural parts or pieces
  - 2205/35 . . Seat, bench or back-rests being split laterally in two or more parts
  - 2205/40 . Dual or redundant actuating means, e.g. backrest tilting can be actuated alternatively by a lever at the backrest or a lever in the luggage compartment
  - 2205/50 . Interlocking shaft arrangements transmitting movement between hinge mechanisms on both sides of a seat
- Indexing scheme associated with groups [B60N 2/00](#) - [B60N 99/00](#), relating to aspects of seats specially adapted for vehicles or vehicle passenger accommodation not otherwise provided for**
- 2210/00 Sensor types, e.g. for passenger detection systems or for controlling seats**
  - 2210/10 . Field detection presence sensors
  - 2210/12 . . Capacitive; Electric field
  - 2210/14 . . Inductive; Magnetic field
  - 2210/16 . . Electromagnetic waves
  - 2210/18 . . . Infrared
  - 2210/20 . . . Radar
  - 2210/22 . . . Optical; Photoelectric; Lidar [Light Detection and Ranging]
  - 2210/24 . . . . Cameras

- 2210/26 . . Ultrasonic, e.g. sonar
- 2210/30 . Temperature sensors
- 2210/40 . Force or pressure sensors
- 2210/42 . . Strain gauges
- 2210/44 . . using fluids
- 2210/46 . . Electric switches
- 2210/48 . . Piezoelectric
- 2210/50 . Inertial sensors

**2220/00 Computerised treatment of data for controlling of seats**

- 2220/10 . using a database
- 2220/20 . using a deterministic algorithm
- 2220/30 . using a neural network

**2230/00 Communication or electronic aspects**

- 2230/10 . Wired data transmission
- 2230/20 . Wireless data transmission
- 2230/30 . Signal processing of sensor data