CPC   COOPERATIVE PATENT CLASSIFICATION

B   PERFORMING OPERATIONS; TRANSPORTING

(NOTES omitted)

TRANSPORTING

B60   VEHICLES IN GENERAL

(NOTE omitted)

B60Q   ARRANGEMENT OF SIGNALLING OR LIGHTING DEVICES, THE MOUNTING OR SUPPORTING THEREOF OR CIRCUITS THEREFOR, FOR VEHICLES IN GENERAL

NOTES

1. This subclass also covers the operation and control of lighting devices, for example:
   • arrangement or adaptation of lighting switches or signal-initiating means for vehicles.
   • control of lighting devices in relation to the vehicle as a whole, e.g. for levelling, swivelling or aiming.
2. This subclass does not cover optical, mechanical, thermal or electrical arrangement of elements within lighting devices, which are covered by groups F21S 41/00 – F21S 45/00.
3. Attention is drawn to the Note following the title of class B60.
4. Attention is drawn to the following places:

   5. B60K 28/00  Safety devices, e.g. sleeping driver
      B60K 29/00  Anti-theft
      B62D   Driving assistance
      B62D 15/02  Steering aids
      B60K 31/0008  Cruise control
      G01S   Infrared night vision
      G01S 13/931  Anti-collision
      G05D 1/00  Automatic pilot
      G06K 9/00  Pattern recognition
      G06T 3/00  Image transformation
      G06T 5/00  Image enhancement
      G06T 7/00  Image analysis
      G08B 21/00  Alarms in general
      G08G   Traffic control
      G08G 1/16  Anti-collision systems
      H04N   Television systems

WARNINGS

1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:
   B60Q 1/128  covered by  B60Q 1/124
   B60Q 1/132  covered by  B60Q 1/124
   B60Q 1/136  covered by  B60Q 1/124
2. In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.
1/0058 . . . [Stacked, i.e. one lamp located behind the other in the optical axis direction]

1/0064 . . . [with provision for maintenance, e.g. changing the light bulb (swivel arrangements B60Q 1/0425; fastening of covers F21S 41/50; changing light sources in general F21V 19/04; fastening of light sources or lamp holders F21S 41/19, F21S 43/19)]

1/007 . . . [via a removable cap (fastening of the light source by a cap holding the light source F21S 41/19, F21S 43/19)]

1/0076 . . . [Switches therefor (B60Q 1/1446, B60Q 1/343, B60Q 1/40) take precedence, arrangements or fitting of control knobs on dashboard B60K 37/06]

1/0082 . . . [mounted on the steering wheel]

1/0088 . . . [Details of electrical connections (B60Q 1/305 takes precedence; electrical connectors in general H01R; electrical connection of the light source itself F21S 41/192, F21S 43/195)]

1/0094 . . . [Arrangement of electronic circuits separated from the light source (e.g. mounting of housings for starter circuits for discharge lamps, circuits per se H05B; arrangements being part of the light source holder F21V 17/06, F21S 41/192, F21S 43/195)]

1/02 . . . the devices being primarily intended to illuminate the way ahead or to illuminate other areas of way or environments

1/04 . . . the devices being headlights

1/0408 . . . [built into the vehicle body, e.g. details concerning the mounting of the headlamps on the vehicle body (B60Q 1/0491, B60Q 1/05 take precedence, integrated front ends B62D 25/00)]

1/0416 . . . [the housing being mounted on the vehicle body using rails]

1/0425 . . . [the housing being swivel mounted on the vehicle body]

1/0433 . . . [the housing being fastened onto the vehicle body using screws (adjustable headlamp by rotation of a screw B60Q 1/0683)]

1/0441 . . . [the housing being fastened onto the vehicle body using means other than screws]

1/045 . . . [with provision for adjusting the alignment of the headlamp housing with respect to the vehicle body (adjusting the light beam B60Q 1/06)]

1/0458 . . . [the front cover being directly mounted onto the vehicle body (mounting the cover on the housing F21S 41/50)]

1/0466 . . . [with arrangement for sealing the headlamp with respect to the vehicle body, or for concealing gaps between the headlamp and the vehicle body]

1/0475 . . . [with provisions for pre-mounting, for temporary holding the headlamp before or during final mounting]

1/0483 . . . [mounted on a bracket, e.g. details concerning the mounting of the lamps on the vehicle body]

1/0491 . . . [Shock absorbing devices therefor (resilient mounting of lighting devices in general F21V 15/04; shock absorbing devices in general F16F 15/04)]

1/05 . . . retractable

1/06 . . . [Adjustable by rotation of a screw]

1/072 . . . [using a position indicator mounted on the headlight and permanently attached thereto]

1/076 . . . [Mounted on a steering wheel]

1/08 . . . [Mounted on the steering wheel]

1/105 . . . [by fluid means]

1/11 . . . [by mechanical means]

1/115 . . . [by electric means (details of the electric drive components, e.g. motors, shafts, ball joints B60Q 1/076)]

1/12 . . . [due to steering position]

1/121 . . . [with fluid actuating means]

1/122 . . . [with electrical actuating means (details of the electric drive components, e.g. motors, shafts, ball joints B60Q 1/076)]

1/124 . . . [by mechanical means]

1/14 . . . [having dimming means (lighting power supply circuits in general H05B)]

1/1407 . . . [General lighting circuits comprising dimming circuits (dimming circuits per se B60Q 1/1415)]

1/1415 . . . [Dimming circuits]

1/1423 . . . [Automatic dimming circuits, i.e. switching between high beam and low beam due to change of ambient light or light level in road traffic]

1/143 . . . [combination with another condition, e.g. using vehicle recognition from camera images or activation of wipers]

1/1438 . . . [Actuating means for dimming masks or screens (adjustable screens per se F21V 11/04)]

1/1446 . . . [controlled by mechanically actuated switches]

1/1453 . . . [Hand actuated switches]

1/1461 . . . [Multifunction switches for dimming headlights and controlling additional devices, e.g. for controlling direction indicating lights]

1/1469 . . . [controlled by or attached to a single lever, e.g. steering column stalk switches]

1/1476 . . . [comprising switch controlling means located near the free end of the lever, e.g. press buttons, rotatable rings]

1/1484 . . . [Mounted on the steering wheel]

1/1492 . . . [Foot actuated switches]
3
1/444 . . . [with indication of the braking strength or speed changes, e.g. by changing shape or intensity of the indication (B60Q 1/1407, B60Q 1/442, B60Q 1/447) take precedence]

1/445 . . . [controlled by inertial devices]

1/447 . . . [with indication of the braking strength or speed changes, e.g. by changing the shape or intensity of the indication]

1/448 . . . [specially adapted for vehicles with ABS]

1/46 . . . for giving flashing caution signals during drive, other than signalling change of direction, e.g. flashing the headlights \(, \) hazard lights \(\) (flashing lights in general F21S 10/06)\]

1/48 . . . for parking purposes \(\) (warning arrangements in garages E04H 7/42)\]

1/482 . . . [for locating vehicle in parking lot]

1/484 . . . [for showing outline of vehicle]

1/486 . . . [for indicating that vehicle is in a parked state]

1/488 . . . [for indicating intention to park]

1/50 . . . for indicating other intentions or conditions, e.g. request for waiting or overtaking

1/503 . . . [using luminous text displays]

1/506 . . . [for signaling silent vehicles, e.g. for warning that a hybrid or electric vehicle is approaching]

1/52 . . . for indicating emergencies \(\) (braking indicating devices B60Q 1/43, portable emergency signal devices B60Q 7/00)\]

1/525 . . . [indicating risk of collision between vehicles or with pedestrians \(\) (using video cameras B62D 1/00; radars designed for anti-collision purposes between land vehicles or between land vehicle and fixed obstacles G01S 13/931; control of position or course in two dimensions for land vehicles G05D 1/021; anti-collision systems for road vehicles G08G 1/16)\]

1/54 . . . for indicating speed \(\) (outside of the vehicle \(\) (automatic vehicle speed controlling fittings including unintended speed signalling devices to the vehicle driver B60K 31/18))\]

1/56 . . . for illuminating registrations or the like \(\) (e.g. for licence plates \(\) (license plates B60R 13/10))\]

3/00 Arrangement of lighting devices for vehicle interiors; Lighting devices specially adapted for vehicle interiors

3/10 . . . [for dashboards]

3/12 . . . lighting onto the surface to be illuminated

3/14 . . . lighting through the surface to be illuminated

3/16 . . . Circuits; Control arrangements

3/18 . . . [for varying the light intensity]

3/20 . . . [for lighting specific fittings of passenger or driving compartments; mounted on specific fittings of passenger or driving compartments (lighting for dashboards B60Q 3/10]

3/208 . . . Sun roofs; Windows

3/217 . . . Doors, e.g. door sills; Steps

3/225 . . . Small compartments, e.g. glove compartments

3/233 . . . Seats; Arm rests; Head rests

3/242 . . . Safety belts; Body harnesses

3/252 . . . Sun visors

3/258 . . . Rear-view mirrors

3/267 . . . Door handles; Hand grips

3/275 . . . Smoking-related fittings, e.g. cigarette lighters or ashtrays

3/283 . . . Steering wheels; Gear levers

3/292 . . . Ignition locks

3/30 . . . [for compartments other than passenger or driving compartments, e.g. luggage or engine compartments]

3/35 . . . [Portable lighting devices]

3/40 . . . specially adapted for specific vehicle types

3/41 . . . [for mass transit vehicles, e.g. buses]

3/43 . . . General lighting

3/44 . . . Spotlighting, e.g. reading lamps

3/46 . . . Emergency lighting, e.g. for escape routes

3/47 . . . Circuits; Control arrangements

3/49 . . . for vehicles with non-fixed roofs, e.g. convertibles

3/50 . . . [Mounting arrangements \(\) (for compartments other than passenger or driving compartments B60Q 3/30; specially adapted for specific vehicle types B60Q 3/40)\]

3/51 . . . [for mounting lighting devices onto vehicle interior, e.g. onto ceiling or floor]

3/53 . . . Modular mounting systems, e.g. using tracks, rails or multiple plugs

3/54 . . . Lighting devices embedded in interior trim, e.g. in roof liners

3/56 . . . Lighting devices mounted on elongate supports, e.g. on flexible arms

3/57 . . . Retractable or concealable lighting devices

3/59 . . . Lighting devices mounted in the vehicle interior and adapted for portability

3/60 . . . characterised by optical aspects

3/62 . . . using light guides

3/64 . . . [for a single lighting device]

3/66 . . . [for distributing light among several lighting devices]

3/68 . . . using ultra-violet light

3/70 . . . characterised by the purpose

3/72 . . . for preventing the driver from being dazzled

3/74 . . . [for overall compartment lighting; for overall compartment lighting in combination with specific lighting, e.g. room lamps with reading lamps \(\) (general lighting mounted on specific fittings B60Q 3/20; general lighting for mass transit vehicles B60Q 3/43)]

3/745 . . . [using lighting panels or mats, e.g. electro-luminescent panels, LED mats]

3/76 . . . for spotlighting, e.g. reading lamps \(\) (spotlighting on or for specific fittings B60Q 3/20; spotlighting in mass transit vehicles B60Q 3/44)

3/78 . . . [for generating luminous strips, e.g. for marking trim component edges]

3/80 . . . Circuits; Control arrangements \(\) (for dashboards B60Q 3/16; for mass transit vehicles B60Q 3/47)

3/82 . . . Switches specially adapted for vehicle interior lighting, e.g. switching by tilting the lens

3/85 . . . [for manual control of the light, e.g. of colour, orientation or intensity]

3/88 . . . Means for plugging to the electrical power supply of the vehicle, e.g. by using cigarette lighter sockets

5/00 Arrangements or adaptations of acoustic signal devices \(\) (sound producing devices in general G10K)\]

5/001 . . . [Switches therefor]
headlamps (testing of electric installations on road vehicle)

Arrangements or adaptations of portable emergency signal devices on vehicles

- to be attached to overhanging loads or extending parts of vehicle

Arrangements or adaptations of signal devices not provided for in one of the preceding main groups, (e.g. haptic signalling)

- for parking purposes, e.g. for warning the driver that his vehicle has contacted or is about to contact an obstacle (warning arrangements in garages E04H 6/42)

- using physical contactors, e.g. arms that trigger alarm upon contact with obstacle

- using wave sensors (radar designed for anti-collision purposes between land vehicles or between land vehicle and fixed obstacles G01S 13931)

- using a video camera

- using a distance sensor

- providing information about the distance to an obstacle, e.g. varying sound

Arrangements of monitoring devices for devices provided for in groups B60Q 1/00 - B60Q 9/00 ([testing of electric installations on road vehicle G01R 31/00])

- Emergency driving lights in the event of failure of the principal lighting circuit

- for lighting devices, e.g. indicating if lamps are burning or not

- the lighting devices indicating change of drive direction (change of drive direction indicators B60Q 1/34)

Indexing codes for automatically adjustable headlamps or automatically dimmable headlamps

- Special features for controlling or switching of the light beam

- Switching delay, i.e. the beam is not switched or changed instantaneously upon occurrence of a condition change

- Variable non-standard intensity, i.e. emission of various beam intensities different from standard intensities, e.g. continuous or stepped transitions of intensity

- Special anti-blinding beams, e.g. a standard beam is chopped or moved in order not to blind

Indexing codes relating to particular vehicle conditions

- Linear movements of the vehicle

- Vehicle speed

- Vehicle acceleration or deceleration

- Vehicle at a stop

- Steering parameters

- Steering angle

- Steering speed

- Hysteresis behaviour based on steering

- Steering dead zone

- Attitude of the vehicle body

- Pitch

- Yaw

- Roll

- Other vehicle conditions

- Turn signal actuation

- Rearward ratio actuation

- Abnormalities, e.g. fail-safe

Indexing codes relating to the driver or the passengers

- Manual control

- Seat occupation

- Driver's line of sight

- Indexing codes relating to the vehicle environment

- Calendar date or clock time

- Atmospheric conditions

- Adverse weather

- Ambient light

- Road surface or travel path

- Road curvature

- Road inclination, e.g. uphill or downhill

- Driving situation

- characterised by the driving side, e.g. on the left or right hand side

- on city roads

- Detection of streetlights

- on suburban or country roads

- on motorways

- Number or size of road lanes

- Crossings

- Tunnels or bridges

- Overtaking

- Indexing codes relating to other road users or special conditions

- preceding vehicle

- oncoming vehicle

- following vehicle
2300/45 Special conditions, e.g. pedestrians, road signs or potential dangers
2300/47 Direct command from other road users, i.e. the command for switching or changing the beam is sent by other vehicles or road devices

2400/00 Special features or arrangements of exterior signal lamps for vehicles

2400/10 Electroluminescent surfaces, i.e. signalling by way of electroluminescent strips or panels
2400/20 Multi-color single source or LED matrix, e.g. yellow blinker and red brake lamp generated by single lamp
2400/30 Daytime running lights [DRL], e.g. circuits or arrangements therefor
2400/40 Welcome lights, i.e. specific or existing exterior lamps to assist leaving or approaching the vehicle
2400/50 Projected signs, i.e. symbol or information is projected onto the road

2500/00 Special features or arrangements of vehicle interior lamps

2500/10 Embedded in interior trim, e.g. integrated in headliner layers
2500/20 Associated with air conditioning arrangements

2900/00 Features of lamps not covered by other groups in B60Q

2900/10 Retrofit arrangements
2900/20 Arrangements for easy recycling, e.g. for easy dismantling or use of special materials
2900/30 Lamps commanded by wireless transmissions