

**CPC****COOPERATIVE PATENT CLASSIFICATION****B61H****BRAKES OR OTHER RETARDING APPARATUS PECULIAR TO RAIL VEHICLES; ARRANGEMENTS OR DISPOSITIONS OF BRAKES OR OTHER RETARDING APPARATUS IN RAIL VEHICLES** (electrodynamic braking of vehicles [B60L](#), in general [H02K](#);

arrangements in rail vehicles for adjusting wheel-braking force to meet varying vehicular or permanent-way conditions [B60T 8/00](#); transmitting braking action from initiating means to ultimate brake actuator with power assistance or drive, brake systems incorporating such transmitting means, e.g. air-pressure brake systems, [B60T 13/00](#) to [B60T 17/00](#); brakes per se [F16D](#))

**B61H 1/00**

**Applications or arrangements of brakes with a braking member or members co-operating with the periphery of the wheel rim, a drum, or the like** (self-applying brakes [B61H 11/02](#); combinations of different types of brakes [B61H 11/14](#); wheels [B60B](#))

**B61H 1/003**

- {with an actuator directly acting on a brake head}

**B61H 1/006**

- {Band brakes}

**B61H 3/00**

**Applications or arrangements of brakes with an outwardly movable braking member or members co-operating with the inner surface of a drum or the like** (self-applying brakes [B61H 11/02](#); combinations of different types of brakes [B61H 11/14](#))

**B61H 5/00**

**Applications or arrangements of brakes with substantially radial braking surfaces pressed together in axial direction, e.g. disc brakes** (self-applying brakes [B61H 11/02](#); combinations of different types of brakes [B61H 11/14](#); {discs adapted for mounting on the wheel of a railway vehicle [F16D 65/124](#)})

**B61H 7/00**

**Brakes with braking members co-operating with the track** (positive railway stops or track brakes secured to permanent way [B61K 7/00](#))

**B61H 7/02**

- Scotch blocks, skids, or like track-engaging shoes

**B61H 7/04**

- . attached to railway vehicles

**B61H 7/06**

- . . Skids

**B61H 7/08**

- . . . electromagnetically operated

**B61H 7/083**

- . . . . {working with eddy currents}

**B61H 7/086**

- . . . . {Suspensions therefor}

**B61H 7/10**

- . unattached

**B61H 7/12**

- Grippers co-operating frictionally with tracks

**B61H 9/00**

**Brakes characterised by or modified for their application to special railway systems or purposes**

**B61H 9/003**

- {for shunting operation or for narrow gauge trains}

**B61H 9/006**

- {Brakes for locomotives}

**B61H 9/02**

- for aerial, e.g. rope, railways

- B61H 9/04
  - for preventing or controlling movement in one direction or, selectively, in either direction
- B61H 9/06
  - for storing energy during braking action
- B61H 11/00**

**Applications or arrangements of braking or retarding apparatus not otherwise provided for; Combinations of apparatus of different kinds or types**
- B61H 11/005
  - {in combination with rail sanding, door opening or the like}
- B61H 11/02
  - of self-applying brakes
- B61H 11/04
  - . with brake-applying force derived from rotation of axle
- B61H 11/06
  - of hydrostatic, hydrodynamic, or aerodynamic brakes
- B61H 11/08
  - . comprising a pump or the like circulating fluid, braking being effected by throttling of the circulation
- B61H 11/10
  - . Aerodynamic brakes with control flaps, e.g. spoilers, attached to the vehicles
- B61H 11/14
  - Combinations of different types of brakes, e.g. brake blocks acting on wheel-rim combined with disc brakes
- B61H 11/16
  - Removable self-contained brake units
- B61H 13/00**

**Actuating rail vehicle brakes** ({actuators directly acting on a brake head [B61H 1/003](#);} self-applying brakes [B61H 11/02](#); wear-compensating mechanisms [B61H 15/00](#))
- B61H 13/005
  - {Spring actuation}
- B61H 13/02
  - Hand or other personal actuation
- B61H 13/04
  - . by mechanisms incorporating toothed gearing
- B61H 13/06
  - Actuating or influencing the brakes by backward pressure of buffers or coupling gear, e.g. buffer brakes
- B61H 13/20
  - Transmitting mechanisms ([wear-compensating mechanisms B61H 15/00](#))
- B61H 13/22
  - . for braking a single wheel or wheels at one side only, e.g. for locomotives or motor railcars
- B61H 13/24
  - . for cars with two axles or bogies with two axles and braking cylinder(s) for each bogie, the mechanisms at each side being interconnected
- B61H 13/26
  - . for cars or bogies with more than two axles or bogies, the mechanisms at each side being interconnected
- B61H 13/28
  - . with variable leverage or mechanical advantage to obtain quick take-up
- B61H 13/30
  - . adjustable to take account of variation of vehicle weight ([automatic adjustment B60T 8/18](#))
- B61H 13/32
  - . . by varying brake lever leverage
- B61H 13/34
  - Details
- B61H 13/36
  - . Beams; Suspension thereof
- B61H 13/38
  - . Suspension or transmitting mechanisms ([B61H 13/36 takes precedence](#))
- B61H 15/00**

**Wear-compensating mechanisms, e.g. slack adjusters**
- B61H 15/0007
  - {mechanical and self-acting in one direction}
- B61H 15/0014
  - . {by means of linear adjustment}
- B61H 15/0021
  - . . {with cams, by friction or clamping}

B61H 15/0028	. . . {with screw-thread and nut}
B61H 15/0035	. {mechanical and self-acting in both directions}
B61H 15/0042	. . {by means of linear adjustment}
B61H 15/005	. . . {with cams, by friction or clamping}
B61H 15/0057	. . . {with screw-thread and nut}
B61H 15/0064	. {mechanical and non-automatic}
B61H 15/0071	. . {by means of linear adjustment}
B61H 15/0078	. . . {with cams, by friction or clamping}
B61H 15/0085	. . . {with screw-thread and nut}
B61H 15/0092	. {hydraulic}