

**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}