CPC COOPERATIVE PATENT CLASSIFICATION

B PERFORMING OPERATIONS; TRANSPORTING

(NOTES omitted)

TRANSPORTING

B61 RAILWAYS

(NOTE omitted)

B61H BRAKES OR OTHER RETARDING DEVICES SPECIALLY ADAPTED FOR RAIL VEHICLES; ARRANGEMENT OR DISPOSITION THEREOF 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; construction, arrangement or operation of valves incorporated in power brake systems B60T 15/00; component parts, details or accessories of brake systems B60T 17/00; brakes in general F16D)

WARNING

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.

1/00 **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)

1/003 . {with an actuator directly acting on a brake head}

1/006 . {Band brakes}

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)

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})

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

7/02 . Scotch blocks, skids, or like track-engaging shoes

7/04 . . attached to railway vehicles

7/06 . . . Skids

7/08 . . . . electromagnetically operated

7/083 . . . . . {working with eddy currents}

7/086 . . . . . {Suspensions therefor}

7/10 . . unattached

7/12 . Grippers co-operating frictionally with tracks

9/00 **Brakes characterised by or modified for their application to special railway systems or purposes**

9/003 . {for shunting operation or for narrow gauge trains}

9/006 . {Brakes for locomotives}

9/02 . for aerial, e.g. rope, railways

9/04 . for preventing or controlling movement in one direction or, selectively, in either direction

9/06 . for storing energy during braking action

11/00 **Applications or arrangements of braking or retarding apparatus not otherwise provided for; Combinations of apparatus of different kinds or types**

11/005 . {in combination with rail sanding, door opening or the like}

11/02 . of self-applying brakes

11/04 . . with brake-applying force derived from rotation of axle

11/06 . of hydrostatic, hydrodynamic, or aerodynamic brakes

11/08 . . comprising a pump or the like circulating fluid, braking being effected by throttling of the circulation

11/10 . . Aerodynamic brakes with control flaps, e.g. spoilers, attached to the vehicles

11/14 . Combinations of different types of brakes, e.g. brake blocks acting on wheel-rim combined with disc brakes

11/16 . Removable self-contained brake units

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)

13/005 . {Spring actuation}

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

15/00 Wear-compensating mechanisms, e.g. slack adjusters

15/0007 . {mechanical and self-acting in one direction}
15/0014 . . {by means of linear adjustment}
15/0021 . . . {with cams, by friction or clamping}
15/0028 . . . {with screw-thread and nut}
15/0035 . {mechanical and self-acting in both directions}
15/0042 . . {by means of linear adjustment}
15/005 . . . {with cams, by friction or clamping}
15/0057 . . . {with screw-thread and nut}
15/0064 . {mechanical and non-automatic}
15/0071 . . {by means of linear adjustment}
15/0078 . . . {with cams, by friction or clamping}
15/0085 . . . {with screw-thread and nut}
15/0092 . {hydraulic}