

Title (en)  
Vehicle and track system for such a vehicle.

Title (de)  
Schienenfahrzeug und dazugehörige Schienenanlage.

Title (fr)  
Véhicule ferroviaire et voie correspondante.

Publication  
**EP 0417932 A1 19910320 (EN)**

Application  
**EP 90309429 A 19900829**

Priority  
JP 23706489 A 19890914

Abstract (en)  
A track vehicle such as a Maglev train has a body (2,3) with superconducting coils (4) mounted thereon which superconducting coils (4) interact with vertically extending coils (10) on guideways (11) of a track (12) to generate a propulsive force. The vehicle runs on wheels (6) at low speeds but at higher speeds the superconducting coils (4) may interact with ground coils (9) to generate a lifting force. In order to reduce or eliminate stresses between the superconducting coils (4) and the vehicle body (2,3), the vehicle has one or more wings (1,100) of airfoil shape which generate lift. That lift may be sufficient to support the whole of the weight of the vehicle, enabling the ground coils (9) to be eliminated. Furthermore, the shape of the superconducting coils (4) may be changed so that they supply more energy to propulsive effects. Preferably the angle of incidence of the wing(s) (1,100) is variable, to permit the lift generated thereby to be varied. This variation in the angle of incidence may be controlled by a sensor (13) detecting the height of the body (2,3) above the track (12), to maintain that height constant.

IPC 1-7  
**B61B 13/08**

IPC 8 full level  
**B60L 13/04** (2006.01); **B61B 13/08** (2006.01)

CPC (source: EP)  
**B61B 13/08** (2013.01)

Citation (search report)  
• [X] WO 8805393 A1 19880728 - BELL GEORGE S [US]  
• [X] US 3721198 A 19730320 - APPLGATE L  
• [X] US 3675582 A 19720711 - GIRARD PETER F, et al

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