

Title (en)
Automatic coupling for railway vehicles.

Title (de)
Selbsttätige Kupplung für Schienenfahrzeuge.

Title (fr)
Attelage automatique pour véhicules ferroviaires.

Publication
EP 0230263 A2 19870729 (DE)

Application
EP 87100407 A 19870114

Priority
DE 3600848 A 19860114

Abstract (en)

1. Automatic coupler for rail vehicles, - with a coupler head according to the Willison principle, one coupler mouth (3) being laterally bordered by coupler claws (1, 2) ; - with a locking gear, arranged in the cavity (4) of the coupler head, comprising a lock (5), a sensing lever (16), an intermediate lever (13), and a pull rod (22), all such elements being movable essentially in horizontal planes only ; - the lock (5) and the sensing lever (16) being loaded to the front by springs (10, 20) in moving direction ; the intermediate lever (13) and the sensing lever (16) being separately pivoted to a common vertical bolt (14) laterally of the lock (5) ; - the intermediate lever (13) being engageable with the lock (5) and the sensing lever (16) and being disengageable from the lock (5) by the pull rod (22), in engaging direction being loaded by a spring (21) and in acting direction of the spring (21) being interceptable by a stop (19) at the sensing lever (16) ; - the intermediate lever (13), with the sensing lever (16) assuming a position corresponding to the opposite coupler head being in place, being engageable by spring force against the locking force of lock (5) behind a first stop face (7) in a front coupling position of the lock (5) and in front of a second stop face (9a) in a rear uncoupling position of the lock (5) said stop surfaces extending from the latter in lateral direction, and, with the sensing lever (16) assuming a position corresponding to the opposite coupling head being out of place, being disengaged from the stop surfaces (7, 9a) of the lock (5), and, - starting from the coupled position, the pull rod (22), when being returned from its normal to an uncoupled position, during a first stroke portion, rotating the intermediate lever (13) out of its engaged position with the first stop face (7), possibly before the end of such stroke portion, and, in any case, during a further stroke portion, engaging the lock (5), taking the latter along, and - the pull rod (22), applying the wall (25), associated to the latter, to the intermediate lever (13), rotating the latter immediately out of its engaged position with the first stopping face (7), and - the intermediate lever (13), until engaging in front of the second stop face (9a), being applied to by spring force and sliding alongside the flank (26) of the lock (5), which moves backward.

Abstract (de)

Die selbsttätige Kupplung der Bauart Willison für Schienenfahrzeuge weist ein Riegelgetriebe mit in waagerechten Ebenen beweglichen Teilen, nämlich einem Riegel 5, einem Zwischenhebel 13, einen Taster 16 und einer Zugstange 22, auf. Der Zwischenhebel 13 ist als Winkelhebel ausgebildet, dessen einer Schenkel 12 mit einem Abschnitt II unter der Kraft einer Drehfeder 21 in zwei in Kupplungslängsrichtung zueinander versetzt angeordnete Ausnehmung 6 und 9 des Kupplungsriegels 5 einzurastern vermag; der Zwischenhebel 13 ist drehbar an einem durch eine Feder 20 in Vorschubrichtung belasteten Taster 16 gelagert. Bei fehlender Gegenkupplung und damit vorgeschobenem Taster 16 rastet der Abschnitt II unter Drehen des Zwischenhebels 13 aus den Ausnehmungen 6 und 9 aus. Auch beim Zurückziehen der Zugstange 22 vermag diese mittels eines Maulstückes 22b den Abschnitt II aus der rückwärtigen Ausnehmung 6 auszurasen. Der eingerastete Abschnitt II sichert den Riegel 5 in dessen Kupplungs- bzw. Entkupplungsstellung.

IPC 1-7
B61G 3/10

IPC 8 full level
B61G 3/10 (2006.01)

CPC (source: EP)
B61G 3/10 (2013.01)

Cited by
EP0364978A1; CN108050148A

Designated contracting state (EPC)
AT BE CH DE FR IT LI SE

DOCDB simple family (publication)
EP 0230263 A2 19870729; EP 0230263 A3 19880323; EP 0230263 B1 19900314; AT E50949 T1 19900315; DD 254710 A5 19880309; DE 3600848 A1 19870716; DE 3761888 D1 19900419

DOCDB simple family (application)
EP 87100407 A 19870114; AT 87100407 T 19870114; DD 29920087 A 19870112; DE 3600848 A 19860114; DE 3761888 T 19870114