

Title (en)  
RAIL FASTENING DEVICES

Title (de)  
VORRICHTUNG ZUM BEFESTIGEN EINER SCHIENE

Title (fr)  
DISPOSITIFS DE FIXATION POUR RAILS

Publication  
**EP 0803013 A1 19971029 (EN)**

Application  
**EP 96900222 A 19960115**

Priority  

- CA 9600021 W 19960115
- CA 2144018 A 19950306
- CA 2162349 A 19951107
- GB 9500700 A 19950113
- US 56632795 A 19951201

Abstract (en)

[origin: WO9623107A1] A steel tie (20) for incorporation in a rail track has rail fastening devices consisting of a pair of opposing longitudinally extending shoulders (51, 52) adapted to accommodate the rail flange (48) between them. Each shoulder (51, 52) has a downwardly facing abutment surface (77), and a resilient rail clip (53, 153) that bears upwardly on the abutment surface (77), an end portion (86, 186) that extends inwardly from the abutment surface (77) and bears resiliently on the upper side of the flange (48) for restraining the rail (22) against vertical movement. A further form of rail clip (301) is in the form of a bent rod that is symmetrical about a vertical plane extending laterally of the rail (22). A further bent rod clip (401) has limb portions (406, 407) extending transversely of the rail (22) and inner and outer portions (407, 403) adapted to bear on the rail flange (48) and on a bearing surface (64), respectively. The limb portions consist of an upper pair (406) and a lower pair (404), and as a result of upward pressure exerted by the rail flange one pair (406) is displaced into contact with the other pair (404) to provide a load bearing cross section of increased depth providing increased strength and bending stiffness. A rail tie plate (201) suitable for attachment to a wood tie, has a pair of upstanding abutment members (204) to accommodate a rail (22), each having an upwardly facing lower ramp surface (227) to facilitate insertion of a rail clip (53, 153).

IPC 1-7  
**E01B 9/48; E01B 9/30; E01B 9/34**

IPC 8 full level  
**E01B 3/16** (2006.01); **E01B 9/34** (2006.01); **E01B 9/40** (2006.01); **E01B 9/48** (2006.01)

CPC (source: EP)  
**E01B 3/16** (2013.01); **E01B 9/34** (2013.01); **E01B 9/40** (2013.01); **E01B 9/483** (2013.01); **E01B 9/486** (2013.01)

Citation (search report)  
See references of WO 9623107A1

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

DOCDB simple family (publication)  
**WO 9623107 A1 19960801**; AU 4382096 A 19960814; AU 713004 B2 19991118; BR 9607185 A 19971111; CN 1175987 A 19980311;  
EP 0803013 A1 19971029

DOCDB simple family (application)  
**CA 9600021 W 19960115**; AU 4382096 A 19960115; BR 9607185 A 19960115; CN 96192009 A 19960115; EP 96900222 A 19960115