Title (en)

BED-PLATE FOR SECURING RAILS AND POINTS OF RAILWAY TRACKS TO WOODEN SLEEPERS.

Title (de)

UNTERLAGSPLATTE FÜR DIE BEFESTIGUNG DER SCHIENEN VON EISENBAHNGLEISEN UND -WEICHEN AUF HOLZSCHWELLEN.

Title (fr)

SELLE POUR LA FIXATION DES RAILS ET AIGUILLAGES DE CHEMIN DE FER SUR DES TRAVERSES EN BOIS.

Publication

EP 0294453 A1 19881214 (DE)

Application

EP 88900572 A 19871215

Priority

DE 3643742 A 19861220

Abstract (en)

[origin: US4921168A] PCT No. PCT/EP87/00781 Sec. 371 Date Aug. 18, 1988 Sec. 102(e) Date Aug. 18, 1988 PCT Filed Dec. 15, 1987 PCT Pub. No. WO88/04707 PCT Pub. Date Jun. 30, 1988.A support plate, particularly a ribbed plate for fastening rails of railroad tracks and track switches on wooden sleepers. The support plate is connected in the vicinity of its ends, in each instance, with the wooden sleeper by means of screws or the like which engage in the through-holes, whereas the rail flange is supported in each instance in the area of the plate between the fastening points on the sleeper side. On the underside of the plate, shoulders are provided or constructed only in the area of the through-holes for the fastening screws, which shoulders project out of the plane of the plate and have a thickness of approximately 1 mm to 2 mm. As a result of the cooperation between the shoulders and the fastening screws, the support plate has a convex curvature, so that its underside comes in supporting contact with the upper surface of the wooden sleeper.

Abstract (fr)

Plaque d'assise, notamment selle (1), pour la fixation des rails de voies de chemin de fer et d'aiguillages sur des traverses en bois (2), laquelle est reliée, au voisinage de ses extrémités (6), avec la traverse en bois (2) au moyen de vis ou analogue s'engageant dans des trous traversants (7), tandis que dans la région de la selle entre les points de fixation côté traverse, le patin de rail comporte un support. Sur la face inférieure (27) de la selle sont prévues ou pratiquées, uniquement dans la région des trous traversants (7) destinés aux vis de fixation, des plate-formes (8) saillantes par rapport au plan de la selle et d'une épaisseur d'environ 1 à 2 mm. Grâce à la coopération des plate-formes (8) avec les vis de fixation, la selle (3) présente une courbure convexe, de sorte que sa face inférieure (27) vient en contact d'appui avec la face supérieure (9) de la traverse.

IPC 1-7

E01B 9/40; E01B 9/68

IPC 8 full level

A01H 5/00 (2006.01); **C07K 7/04** (2006.01); **C12N 1/00** (2006.01); **C12N 1/20** (2006.01); **C12N 1/21** (2006.01); **C12N 5/00** (2006.01); **C12N 5/10** (2006.01); **C12N 9/00** (2006.01); **C12N 9/14** (2006.01); **C12N 9/78** (2006.01); **C12N 9/88** (2006.01); **C12N 15/00** (2006.01); **C12N 15/09** (2006.01); **C12N 15/63** (2006.01); **C12N 15/64** (2006.01); **C12N 15/70** (2006.01); **C12N 15/82** (2006.01); **C12P 1/00** (2006.01); **C12P 1/04** (2006.01); **C12P 19/34** (2006.01); **E01B 7/02** (2006.01); **E01B 7/22** (2006.01); **E01B 9/36** (2006.01); **E01B 9/38** (2006.01); **E01B 9/40** (2006.01); **E01B 9/68** (2006.01); C12R 1/19 (2006.01); C12R 1/22 (2006.01); C12R 1/91 (2006.01)

IPC 8 main group level

E01B (2006.01)

CPC (source: EP US)

C12N 9/78 (2013.01 - EP US); **C12N 15/63** (2013.01 - EP US); **C12N 15/64** (2013.01 - EP US); **C12N 15/70** (2013.01 - EP US); **C12N 15/8274** (2013.01 - EP US); **E01B 7/02** (2013.01 - EP US); **E01B 9/40** (2013.01 - EP US)

Citation (search report)

See references of WO 8804707A1

Designated contracting state (EPC)

AT BE CH DE FR GB IT LI LU NL SE

DOCDB simple family (publication)

US 4921168 A 19900501; AT E58925 T1 19901215; AU 1089688 A 19880715; AU 600077 B2 19900802; DE 3643742 A1 19880630; DE 3766611 D1 19910117; DK 163528 B 19920309; DK 163528 C 19920824; DK 462388 A 19880818; DK 462388 D0 19880818; EP 0275604 A1 19880727; EP 0275604 B1 19901205; EP 0294453 A1 19881214; ES 2019094 B3 19910601; FI 883822 A0 19880818; FI 883822 A 19880818; FI 92341 B 19940715; FI 92341 C 19941025; HU 207354 B 19930329; IN 170374 B 19920321; JP 2530364 B2 19960904; JP H01501722 A 19890615; NO 170770 B 19920824; NO 170770 C 19921202; NO 883746 D0 19880822; NO 883746 L 19880822; WO 8804707 A1 19880630; YU 233787 A 19900430; YU 47405 B 19950327

DOCDB simple family (application)

US 24956688 A 19880818; AT 87202596 T 19871215; AU 1089688 A 19871215; DE 3643742 A 19861220; DE 3766611 T 19871215; DK 462388 A 19880818; EP 8700781 W 19871215; EP 87202596 A 19871215; EP 88900572 A 19871215; ES 87202596 T 19871215; FI 883822 A 19880818; HU 85788 A 19871215; IN 902MA1987 A 19871215; JP 50073888 A 19871215; NO 883746 A 19880822; YU 233787 A 19871221