

Title (en)  
VEHICLE PASSAGE CONTROL DEVICE

Title (de)  
FAHRZEUGDURCHGANG-STEUERUNGSVORRICHTUNG

Title (fr)  
DISPOSITIF DE CONTRÔLE DU PASSAGE DE VÉHICULES

Publication  
**EP 2402509 A4 20130522 (EN)**

Application  
**EP 10746214 A 20100224**

Priority  
• JP 2010052812 W 20100224  
• JP 2009042562 A 20090225

Abstract (en)  
[origin: US2011271593A1] Disclosed is a vehicle passage control device capable of suppressing damage and breakage of an opening/closing bar thereof to the minimum, and suppressing damage and the like of a vehicle to the minimum even if the vehicle collides with the opening/closing bar. The vehicle passage control device is a vehicle passage control device in which an opening/closing bar 12 that regulates passage of a vehicle is provided, the vehicle passage control device being installed at a passage gate of an entrance or exit of a toll road or the like. The vehicle passage control device performs opening/closing control for the opening/closing bar 12 to rotationally move and upspring obliquely upward in front in a passing direction of the vehicle. An inclined angle  $\theta$  at which the opening/closing bar 12 rotationally moves and upsprings obliquely upward remains within a range from approximately 25 degrees to approximately 55 degrees with respect to a road surface. A vehicle sensing sensor that senses a vehicle approaching a front of the opening/closing bar 12 is provided, and an instruction to open the opening/closing bar 12 is issued when the vehicle is sensed by the vehicle sensing sensor. When a predetermined load or more is applied to the opening/closing bar 12, an instruction to perform an opening operation is issued to the opening/closing bar 12.

IPC 8 full level  
**E01F 13/04** (2006.01)

CPC (source: EP KR US)  
**E01F 13/04** (2013.01 - KR); **E01F 13/06** (2013.01 - EP KR US)

Citation (search report)  
• [Y] DE 7406696 U  
• [Y] JP 2000043729 A 20000215 - KOITO KOGYO KK  
• [A] EP 1491687 A1 20041229 - BEHAN KEVIN [GB], et al  
• See references of WO 2010098334A1

Cited by  
DE102015209725A1

Designated contracting state (EPC)  
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DOCDB simple family (publication)  
**US 2011271593 A1 20111110**; CN 102317546 A 20120111; CN 102317546 B 20150401; EP 2402509 A1 20120104; EP 2402509 A4 20130522; JP 2010196367 A 20100909; JP 5264554 B2 20130814; KR 101393471 B1 20140513; KR 20110104985 A 20110923; WO 2010098334 A1 20100902

DOCDB simple family (application)  
**US 201013145280 A 20100224**; CN 201080007656 A 20100224; EP 10746214 A 20100224; JP 2009042562 A 20090225; JP 2010052812 W 20100224; KR 20117018197 A 20100224