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(54) **Title:** CONSTANT VELOCITY JOINT

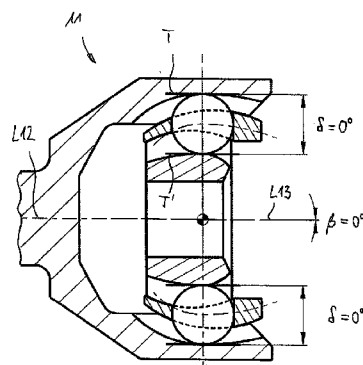


Fig. 1b

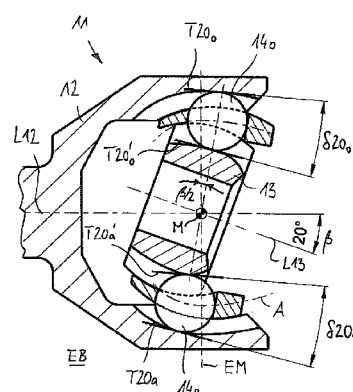


Fig. 1c

(57) **Abstract:** The invention relates to a constant velocity joint comprising: an outer joint part 12 with a longitudinal axis L12 and outer ball tracks 22, wherein the outer joint part 12 comprises an attachment side and an aperture side; an inner joint part 13 with a longitudinal axis L13 and inner ball tracks 23; a torque transmitting ball 14 in each pair of tracks 22, 23; a ball cage 15 with cage windows 18 in which the balls 14 are held, wherein in each angular position of the constant velocity joint 11 there is enclosed an opening angle  $\delta$  between an outer tangent T and an inner tangent T' at the ball 14, wherein at least one of the pairs of tracks is designed such that, inside a small articulation angle range, which comprises at least the joint central plane EM, in at least one joint articulation angle  $\beta$ , an opening angle  $\delta$  amounts to zero, and that inside a larger articulation angle range, an aperture side opening angle  $\delta$  of a ball 14 moving towards the aperture side of the outer joint part 12 and an attachment side opening angle  $\delta$  of a ball 14 moving at the same joint articulation angle  $\beta$  towards the attachment side of the outer joint part 12 do not equal zero and open in the same axial direction.



**INTERNATIONAL SEARCH REPORT**

International application No  
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**A. CLASSIFICATION OF SUBJECT MATTER**  
 INV. F16D3/223 F16D3/2233 F16D3/2245  
 ADD.  
 According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**  
 Minimum documentation searched (classification system followed by classification symbols)  
 F16D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
 EPO-Internal

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

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A	DE 10 2004 018777 A1 (GKN DRIVELINE DEUTSCHLAND GMBH [DE]) 31 March 2005 (2005-03-31) figures	1-20
A	US 2 046 584 A (RZEPPA ALFRED H) 7 July 1936 (1936-07-07) figures	1-20
A	EP 2 119 931 A1 (NTN TOYO BEARING CO LTD [JP]) 18 November 2009 (2009-11-18) figures 15,16	1-20

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- "&" document member of the same patent family

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