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Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv))

Published:

— with international search report

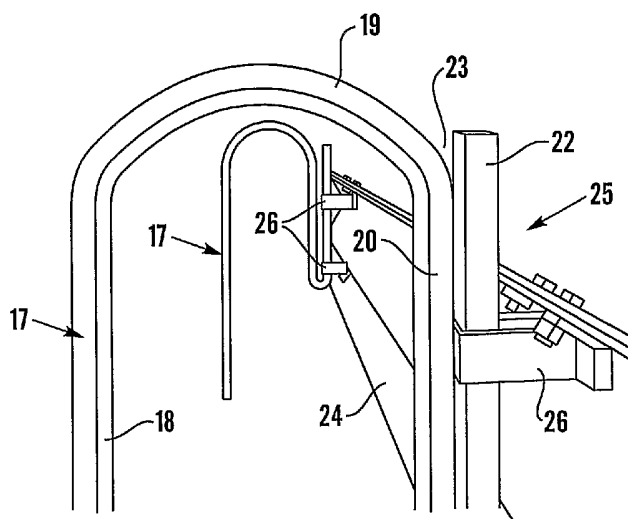
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:

12 October 2006

[Continued on next page]

(54) Title: IMPACT RESISTING POST



(57) Abstract: An impact resisting post for a crash barrier comprises a primary post configuration. The primary post configuration comprises an anchorage portion operable for anchoring the post, a first resilient portion extending longitudinally from the anchorage portion, a second resilient portion interconnected with, but spaced transversely from the first resilient portion, and a mounting portion (22) for mounting a barrier member on the post. The resilient portions are configured to resiliently respond to an impact, such that when the impact exerts a force on the second resilient portion towards the first resilient portion, the first portion moves resiliently away from the impact, and the second portion moves resiliently towards the first portion. The mounting portion comprises a further resilient portion transversely spaced from at least one of the first and second resilient portions.



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No

PCT/GB2006/000553

A. CLASSIFICATION OF SUBJECT MATTER
INV. E01F15/04

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)

E01F

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 practical, search terms used)

EP0-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6 234 437 B1 (CABO RICARDO F) 22 May 2001 (2001-05-22) column 3, line 22 - line 34 figure 1	1-27, 33-45
Y	FR 1 342 053 A (A. NEHER MASCHINENFABRIK, STAHL UND APPARATENBAU G. M. B. H.) 2 November 1963 (1963-11-02) page 3, column 2, line 26 - line 38 figures 6-9	1-27, 33-45
A	US 6 076 871 A (JARVIS ET AL) 20 June 2000 (2000-06-20) the whole document	1
A	US 2 163 809 A (RAUEN JOHN B) 27 June 1939 (1939-06-27) the whole document	1
	-/--	



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

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Date of the actual completion of the international search

8 August 2006

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INTERNATIONAL SEARCH REPORT

International application No
PCT/GB2006/000553

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2 136 415 A (CORNETT WALTER V) 15 November 1938 (1938-11-15) the whole document -----	1
A	DE 12 91 350 B (A. NEHER GMBH, STAHL- UND APPARATEBAU) 27 March 1969 (1969-03-27) the whole document -----	1
X	US 2002/127056 A1 (MULLER FRANZ ET AL) 12 September 2002 (2002-09-12) the whole document -----	28-32, 46-49
A	US 6 413 009 B1 (DUCKETT JOHN W) 2 July 2002 (2002-07-02) the whole document -----	28
A	EP 0 543 749 A (BOYER S.A) 26 May 1993 (1993-05-26) the whole document -----	28

INTERNATIONAL SEARCH REPORT

International application No.
PCT/GB2006/000553

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-27,33-45

An impact resisting post

1.1. claims: 17-18

An impact resisting post having a reinforcing member ro
absor heavy impacat

1.2. claims: 24-27,33-45

An impact resisting post in combination with a barrier
member having hinges

2. claims: 28-32,46-49

Barrier member having hinges

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/GB2006/000553

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6234437	B1	22-05-2001	NONE
FR 1342053	A	02-11-1963	NONE
US 6076871	A	20-06-2000	AU 5342396 A 07-11-1996 CA 2218514 A1 24-10-1996 DE 69610835 D1 07-12-2000 DE 69610835 T2 13-06-2001 EP 0833792 A1 08-04-1998 WO 9633117 A1 24-10-1996
US 2163809	A	27-06-1939	NONE
US 2136415	A	15-11-1938	NONE
DE 1291350	B	27-03-1969	NONE
US 2002127056	A1	12-09-2002	EP 1247905 A2 09-10-2002 IT MI20010521 A1 12-09-2002
US 6413009	B1	02-07-2002	AU 781489 B2 26-05-2005 AU 4376201 A 09-05-2002 BR 0102651 A 02-07-2002 NZ 511631 A 27-09-2002
EP 0543749	A	26-05-1993	FR 2683840 A1 21-05-1993