

Title (en)  
Explosive ammunition with increased resistance against shocks

Title (de)  
Explosivkörper mit verbesserter Stossfestigkeit

Title (fr)  
Obus explosif ayant une tenue aux chocs améliorée

Publication  
**EP 1533590 A1 20050525 (FR)**

Application  
**EP 04292486 A 20041020**

Priority  
FR 0313523 A 20031117

Abstract (en)  
The shell has a washer (9) placed on an upper side of an elastic ring (6). The outer diameter of the washer is lower than an inner diameter of an opening of an envelope. A connecting unit (10) pushes the washer to compress the ring. The washer allows friction of the unit (10). The washer and the unit (10) form a compression unit that exerts a compressive stress, on the ring, that is transmitted to a load for maintaining the load. The load slides inside the envelope. The ring is placed between a front part of the envelope and the load. The ring has a collar housed in a groove of the envelope.

Abstract (fr)  
L'invention a pour objet un obus explosif (1) comprenant un chargement explosif (2) fusionnable disposé dans une enveloppe (3) comportant une ouverture (4). Cet obus est caractérisé en ce qu'il comprend un moyen de calage (6) disposé au voisinage de l'ouverture (4) de l'obus, moyen de calage comprenant une bague (6) réalisée en un matériau élastique et qui est interposée entre une partie avant de l'enveloppe (3) de l'obus et le chargement explosif (2), bague qui est comprimée par un moyen de compression (9,10). <IMAGE>

IPC 1-7  
**F42B 12/20; F42B 30/08**

IPC 8 full level  
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Citation (search report)  
• [A] EP 1338860 A2 20030827 - RHEINMETALL W & M GMBH [DE]  
• [A] DE 3929020 A1 19910321 - DIEHL GMBH & CO [DE]  
• [A] US 4760795 A 19880802 - YOUNG FREDERICK M [GB]  
• [A] US 4365556 A 19821228 - REIBEL PAUL F  
• [A] US 4945834 A 19900807 - YOUNG FREDERICK M [GB]

Cited by  
CN110030884A; FR2924494A1; EP3267143B1

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FR 2862378 A1 20050520; FR 2862378 B1 20071123; NO 20044980 L 20050518; NO 338258 B1 20160808; PL 1533590 T3 20121130;  
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