Title (en)

PROJECTILE WITH PAYLOAD SECTION AND PROPULSION SECTION

Publication

EP 0151676 B1 19900613 (DE)

Application

EP 84107615 A 19840630

Priority

DE 3327945 A 19830803

Abstract (en)

[origin: EP0151676A2] 1. Projectile with a propulsion part (11) which coaxially surrounds a payload part (12) and in which the payload part (12) is mounted in such a way as to be telescopically displaceable, the propulsion part (11) of the projectile (10) being constructed as a ram jet power unit with an annular diffuser (17, 19), solid fuel being present in the form of an annular casing on the inner wall of the central combustion chamber (11) which is of tubular construction, when the payload part (12) occupies the extended forward position the air duct through the propulsion part (11) is open, whereas the duct is closed when the payload part occupies the rearward position, that is when the projectile is located in the barrel of the weapon, and remains in the closed position until the projectile (10) has left the said barrel, characterised by the following features : (a) the payload part (12), when in the rearward position, is retracted over almost the entire length thereof into the propulsion part (11), the solid fuel (15) surrounding the payload part (12) substantially without a gap ; (b) a pressure chamber (11') is formed in the rear zone of the propulsion part (11) and is closed by a propulsion disc (13) with a central axial boring (13'), the propulsion disc (13) being detachable after the payload part has been thrust forward into the forward position ; (c) the size of the aperture provided by the boring (13') in the propulsion disc (13) and also the volume of the pressure chamber (11') in the propulsion part (11) behind the payload part (12) in the rearward position being selected to ensure that the force exerted by the propulsion charge gases flowing through the boring (13') into the pressure chamber (11') - as long as the projectile (10) is still in the barrel - is less than the inertia force of the payload part (12) during the acceleration phase in the barrel.

IPC 1-7

F42B 15/00

IPC 8 full level

F42B 15/00 (2006.01)

CPC (source: EP)

F42B 15/00 (2013.01)

Citation (examination)

US 2989922 A 19610627 - GREENWOOD MARVIN H, et al

Cited by

US9823053B1; US6640720B1; WO0075600A1; WO0075599A1; US6928931B1; US11781842B1; WO2023137255A1; WO0075601A1; WO2023192694A1

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