

Title (en)

Device for firing a projectile without ejection of gases towards the rear, nor recoil, by means of a launching tube open at both ends.

Title (de)

Vorrichtung zum Abfeuern eines Geschosses ohne rückwärtige Gasabfuhr und ohne Rückstoss mittels eines beidseitig offenen Abschussrohres.

Title (fr)

Dispositif pour permettre le tir d'un projectile sans éjection de gaz vers l'arrière, ni recul, au moyen d'un tube de lancement ouvert à ses deux extrémités.

Publication

EP 0027418 A1 19810422 (FR)

Application

EP 80401451 A 19801009

Priority

FR 7925232 A 19791010

Abstract (en)

1. Claims for the Contracting States : SE, IT, CH, LI Device enabling to launch a projectile without backward gas ejection or recoil, using a launching tube (10) open at both ends, which device comprises a projectile (11, 21), a propelling charge (12, 22) situated behind the projectile, an inert mass (14, 24) situated behind the propelling charge and designed to be ejected at the back of the launching tube at firing time, and a piston (13, 23) separating in tight manner the propelling charge from the inert mass and being able to slide backwards after the firing of the propelling charge, along an axially extending portion at the back of the projectile, which portion is provided with means of stopping the piston at its rear end, characterized in that : the projectile (11, 21) is extended at its rear part by at least one rod (15, 25) integral with the projectile and of external diameter smaller than that of the projectile ; the piston (13, 23) is in direct contact with the propelling charge (12, 22) and the inert mass (14, 24) ; the means of stopping the piston are means (16, 26) of permanently holding the piston on the rod ; and means (13a, 27) are provided for aerodynamically stabilizing the projectile in flight with the rod and the piston. 1. Claims for the Contracting States : DE, GB Device enabling to launch a projectile without recoil, using a launching tube (10) open at both ends, which device comprises a projectile (11) extended at its back part by at least a rod (15) which is axially directed and fast with the projectile ; a propelling charge (12) situated behind the projectile and about the rod (15) ; an inert mass (14) situated behind the propelling charge and about the rod (15) and designed to be ejected at the back of the launching tube at firing time ; and a piston (13) separating in tight manner the propelling charge (12) from the inert mass (14) inside the annular space situated between the external surface of the rod (15) and the inner surface of the launching tube (10) when the device is loaded therewith, the piston (13) being able to slide after firing towards the rear end of the rod (15), characterized in that, in order to prevent gas ejection towards the back of the launching tube (10), the rod (15) is provided at its rear end with means (16) of holding back the piston (13) on the rod (15) after firing ; and in that the face (13a) of piston (13) which is directed towards the projectile (11) is streamlined in order to aerodynamically stabilize the projectile (11) in flight with the rod (15) and piston (13).

Abstract (fr)

Le dispositif comporte un projectile (11) prolongé à l'arrière par une tige (15) solidaire du projectile et de diamètre inférieur à celui du projectile, une charge propulsive (12) située derrière le projectile, une masse inerte (14) destinée à être éjectée à l'arrière du tube de lancement (10), un piston (13) séparant de façon étanche la charge (12) de la masse inerte (14) et pouvant coulisser vers l'arrière le long de la tige (15), des moyens (16) de retenue permanente du piston à l'arrière de la tige et des moyens (13a) de stabilisation aéro-dynamique en vol de l'ensemble projectile-tige-piston.

IPC 1-7

F41F 3/02; F42B 9/12

IPC 8 full level

F41A 1/10 (2006.01)

CPC (source: EP)

F41A 1/10 (2013.01)

Citation (search report)

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