

Title (en)
FIREARM SUPPRESSOR

Title (de)
DÄMPFER FÜR SCHUSSWAFFE

Title (fr)
SUPPRESSEUR POUR ARME À FEU

Publication
EP 2191223 B1 20111123 (EN)

Application
EP 08874639 A 20080917

Priority
• US 2008010806 W 20080917
• US 99428007 P 20070918

Abstract (en)
[origin: WO2009151428A2] A Controlled Unaided Surge and Purge (CUSPS) suppressor for firearms uses the blast and plume characteristics inherent to the ballistic discharge process to develop a new two-step controlled surge and purge system centered around advanced mixer-ejector concepts. The blast surge noise is reduced by controlling the flow expansion, and the flash effects are reduced by controlling inflow and outflow gas purges. In the preferred embodiment, suppressor vent holes are convergently contoured to better reduce the blast surge. Preferably a two-stage supersonic mixer/ejector system, in combination with adjacent vent holes in the suppressor housing and a divergent entrance nozzle, is used to control or eliminate the external Mach disk, while rapidly mixing and diluting the propellant with purged gases. A diffuser downstream of the mixer/ejector system further increases ejector performance and pumping. The pumped gases are used to self-clean and cool the CUSPS suppressor.

IPC 8 full level
F41A 21/30 (2006.01); **F41A 21/34** (2006.01)

CPC (source: EP)
F41A 21/30 (2013.01); **F41A 21/34** (2013.01)

Cited by
US10458737B2; US10746491B2; US10107581B2; US10429146B2; US9417021B2

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

DOCDB simple family (publication)
WO 2009151428 A2 20091217; WO 2009151428 A3 20100218; AT E534880 T1 20111215; CA 2700203 A1 20091217; EP 2191223 A2 20100602; EP 2191223 B1 20111123

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US 2008010806 W 20080917; AT 08874639 T 20080917; CA 2700203 A 20080917; EP 08874639 A 20080917