

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

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