

Title (en)
Repeating detonation device.

Title (de)
Mehrfach Detonationsmaschine.

Title (fr)
Dispositif de détonation répétée.

Publication
EP 0291545 A1 19881123 (EN)

Application
EP 87107217 A 19870518

Priority
EP 87107217 A 19870518

Abstract (en)
A purging and recharging system improves the repeating of detonations from a detonation device 10 having a detonation chamber 20 separated from an ignition chamber 25 by a detonation plate 22 having an opening 23 through which a flame jet can pass from ignition chamber 25 to detonation chamber 20. A differential piston 30 driven by a detonation in a differential cylinder 31, 32 around detonation chamber 20 affords a fluid passageway between differential piston 30 and detonation chamber 20. On a power stroke, differential piston 30 compresses recharging air and draws in cooling and exhaust purging air to surround detonation chamber 20. On a return stroke, differential piston 30 forces cooling and purging air into detonation chamber 20 and then admits compressed recharging air into detonation chamber 20. A check valve 55 on the detonation side of the opening in detonation plate 22 admits fluid and flame from ignition chamber 25 into detonation chamber 20 during ignition and blocks backflow of fluid or flame from detonation chamber 20 into ignition chamber 25 during detonation.

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F02B 71/04; **B25C 1/08**

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CPC (source: EP)
B25C 1/08 (2013.01); **F02B 71/04** (2013.01)

Citation (search report)
• [A] FR 2463267 A1 19810220 - LIESSE MAURICE [FR]
• [A] FR 2001658 A1 19690926 - B K
• [A] US 4599861 A 19860715 - BEAUMONT RICHARD W [US]
• [A] US 3395688 A 19680806 - PFETZING HENRY V

Cited by
EP3184249A1; EP2106883A1; WO2017045972A1; JP2009248302A

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