

Title (en)  
PROJECTILE DRILLING SYSTEM

Title (de)  
GESCHOSSBOHRSYSTEM

Title (fr)  
SYSTÈME DE FORAGE À PROJECTILE

Publication  
**EP 4314472 A1 20240207 (EN)**

Application  
**EP 22717512 A 20220329**

Priority  

- US 202163168133 P 20210330
- US 202217656133 A 20220323
- US 2022071422 W 20220329

Abstract (en)  
[origin: WO2022213074A1] Geologic material in a borehole is weakened by accelerating a projectile into contact with the material. A drill bit is then used to bore through the weakened material. To accelerate the projectile, an endcap is placed in a conduit using a source of gas. The endcap isolates the conduit from the external environment. A projectile is then positioned in the conduit above the endcap. Movable members within the conduit are operated in sequence to enable single endcaps and projectiles to be moved into the conduit. Gas from the conduit is evacuated into an annulus between the conduit and a surrounding conduit, and a propellant material is provided into the conduit. The propellant material applies a force to the projectile to accelerate the projectile into contact with the geologic material. A fluid is circulated down a second annulus outside of the surrounding conduit to contact the drill bit and remove debris.

IPC 8 full level  
**E21B 7/16** (2006.01); **E21B 7/00** (2006.01); **E21B 17/18** (2006.01)

CPC (source: EP)  
**E21B 7/007** (2013.01); **E21B 7/16** (2013.01); **E21B 17/18** (2013.01)

Citation (search report)  
See references of WO 2022213074A1

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

Designated extension state (EPC)  
BA ME

Designated validation state (EPC)  
KH MA MD TN

DOCDB simple family (publication)  
**WO 2022213074 A1 20221006**; CA 3213213 A1 20221006; EP 4314472 A1 20240207

DOCDB simple family (application)  
**US 2022071422 W 20220329**; CA 3213213 A 20220329; EP 22717512 A 20220329