

Title (en)

Method and apparatus for soil excavation and the like.

Title (de)

Verfahren und Vorrichtung zum Ausheben von Boden und dergleichen.

Title (fr)

Procédé et dispositif d'excavation du sol ou similaire.

Publication

EP 0251660 A1 19880107 (EN)

Application

EP 87305583 A 19870623

Priority

US 87728086 A 19860623

Abstract (en)

A method and apparatus (2) suitable for excavating a soil mass and like granular materials in which pressurized gas, preferably air, is provided in a reservoir and directed through appropriate valve (4) and duct means to a converging/diverging nozzle (50) positioned at the exit of the duct means. The nozzle includes a restricted throat section and a diverging transitional section which terminates in an outlet section. The ratio of the area of the outlet section to the area of the throat section is greater than 1.0 and preferably greater than 1.2 or more, while the ratio of reservoir pressure to ambient pressure is greater than about 1.9 and preferably greater than 3.7, whereby a gas stream having a calculated velocity greater than Mach 1, and preferably in excess of Mach 1.5 or more, is produced. The high velocity gas stream infiltrates the soil mass creating fissures and cavities, then stagnates within the cavities and violently expands to fracture the mass.

IPC 1-7

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IPC 8 full level

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CPC (source: EP)

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Citation (search report)

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