



ISTITUTO ITALIANO
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TITLE

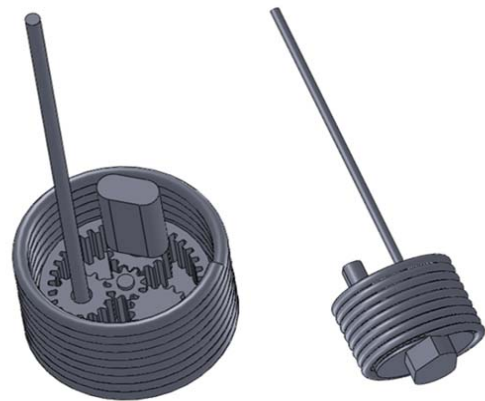
System for non-disruptive penetration of a substrate

INVENTORS

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DESCRIPTION

The invention relates to a new robotic device able to grow, crawl, and dig. The main concept of this robotic device is the inspiration to the capability of plant roots to penetrate in the soil while they grow and elongate by cells addition from the tip. This system, which has a cylindrical shape, can develop its own body by adding artificial material and, consequently, can elongate and mimic the root behavior in penetrating and exploring the soil in an efficient way. The concept of a mechanical system that can grow leads to a new generation of robots which can create some parts of their body and adapt more safely to surrounding environments.



APPLICATIONS

Surgery, industrial areas, drug delivery, monitoring, maintenance, camera and sensors handling

KEYWORDS

Growing robot; micro / macro (human scale)-tunneling system; tubular system; penetration mechanism without peripheral body friction; noninvasive penetration; elongation from the tip

BIBLIOGRAPHIC DATA

Sistema per la penetrazione non distruttiva di un substrato

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