

Title (en)  
EXCAVATOR AND METHOD FOR EXCAVATING SOIL

Title (de)  
BAGGER UND VERFAHREN ZUM AUSHEBEN VON ERDREICH

Title (fr)  
EXCAVATEUR ET PROCÉDÉ D'EXCAVATION DE SOL

Publication  
**EP 4130404 A1 20230208 (EN)**

Application  
**EP 22186863 A 20220726**

Priority  
BE 202105627 A 20210805

Abstract (en)  
Described is an excavator for excavating soil in which a problematic object, such as unexploded ordnance, may be present. The excavator comprises an assembly of mutually pivotable arms which is connected to a chassis, and a pivotably arranged excavator bucket. At least parts of the excavator bucket and the outermost arm are embodied in a substantially non-magnetizable material. The excavator bucket further comprises a measuring device of magnetometers which are positioned at a mutual distance and which are configured to measure the local magnetic field vectors. The magnetometers are connected to a computer via a data and power cable with interposing of a data collection unit for collecting the magnetic field vector data measured by the magnetometers. The measuring device is further configured to determine the vector difference between said local magnetic field vectors, wherein a vector difference differing from zero indicates a disruption of the earth's magnetic field by the object, allowing the presence thereof to be detected.

IPC 8 full level  
**E02F 9/26** (2006.01); **E02F 3/407** (2006.01); **E02F 3/43** (2006.01); **E02F 3/92** (2006.01); **E02F 7/06** (2006.01); **E02F 9/24** (2006.01); **F41H 11/22** (2006.01)

CPC (source: EP)  
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Citation (applicant)  
• WO 2016008059 A1 20160121 - CADATECH S A [CL]  
• KR 20210048913 A 20210504 - KOREA ELECTRIC POWER CORP [KR]  
• JP 2005350883 A 20051222 - CHOWA KOGYO KK, et al

Citation (search report)  
• [Y] WO 2016008059 A1 20160121 - CADATECH S A [CL]  
• [XAYI] KR 20210048913 A 20210504 - KOREA ELECTRIC POWER CORP [KR]  
• [Y] JP 2005350883 A 20051222 - CHOWA KOGYO KK, et al  
• [A] KR 101725731 B1 20170411 - NA MIN SOO [KR]  
• [A] US 4527123 A 19850702 - GILMAN ROBERT F [US], et al  
• [A] LORENC S J ET AL: "Excavator-mounted ordnance locating system using electromagnetic sensing technology", AUTOMATION IN CONSTRUCTION, ELSEVIER, AMSTERDAM, NL, vol. 7, no. 4, 1 May 1998 (1998-05-01), pages 243 - 258, XP004128219, ISSN: 0926-5805, DOI: 10.1016/S0926-5805(97)00069-1

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Designated extension state (EPC)  
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KH MA MD TN

DOCDB simple family (publication)  
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