

Title (en)  
A SYSTEM FOR DETECTING AND VISUALIZING MINES INCLUDING THE PLASTIC ONES BURIED UNDERGROUND BY THERMAL IMAGING

Title (de)  
SYSTEM ZUR ERFASSUNG UND VISUALISIERUNG VON MINEN, EINSCHLIESSLICH UNTERIRDISCH VERLEGTER AUS KUNSTSTOFF,  
MITTELS THERMISCHER BILDGEBUNG

Title (fr)  
SYSTÈME DE DÉTECTION ET DE VISUALISATION PAR IMAGERIE THERMIQUE DE MINES Y COMPRIS DES MINES EN PLASTIQUE  
ENTERRÉES

Publication  
**EP 3516427 A1 20190731 (EN)**

Application  
**EP 16863203 A 20161111**

Priority  
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• TN 2016000003 W 20161111

Abstract (en)  
[origin: WO2018056913A1] This invention is a means, or, a method for detecting, visualizing, and, imaging mines, and, war scraps such as unexploded bombs, and, missiles, and, which are buried under ground through the use of thermal cameras to image the lands of buried mines, and, war scraps, and, provided that the ground is preheated before the use of highly sensitive thermal cameras, and, thus the heating is done by a suitable heating means, such as the high powered halogen lamps, for few minutes to raise the temperature for 2 to 5 Celsius, or more, where the camera screen would show the underground mines, and, the rest of things buried there, among which are stones, and, metals, up to the thermal qualities of each material, thus the temperature of on the cooling of each material would differ in cooling speed, that may give the camera a chance to differentiate between materials, during imaging, by the different acquisition of the IR emitted during the cooling phase, and, which penetrates the sand, dirt, and, earth covering the mine, or, the buried mass, as if imaged by X-rays, and, depending on the depth of the burying ground, its composition, and, the heating lamp power, and, its elevation from the earth surface, and, the heating time, and, the thermal camera sensitivity, while an auxiliary imaging system, that uses the Sonar technology ( Array ECHO Probe ), to determine the depth of the mine underground, while its base of work depends on using ultrasound technology like the sonar used in medical checks (ECHO ).

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