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(54) **OPERATING METHOD OF A METAL DETECTOR CAPABLE OF MEASURING TARGET DEPTH**

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(58) **Field of Classification Search**
None
See application file for complete search history.

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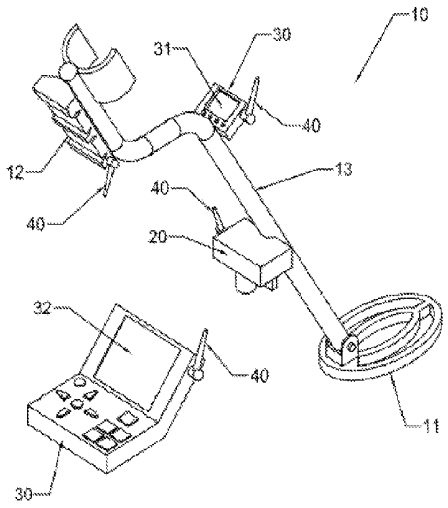
(57) **ABSTRACT**

The present invention, thanks to the horizontal positional tracking unit (**20**)—mounted to a hand-held metal detector (**10**)—consisting of optical flow sensor lens (**22**), an optical flow sensor camera (**21**), an optical flow sensor processor (**23**), a height sensor (**24**) and an IMU sensor (**25**); allows the calculation of the depth of the target (**60**) by tracking the horizontal position while the user freely sweeps the search head (**11**) of the metal detector (**10**) with the "optical flow" method and using the metal detection signals received from many point positions around the detected target center with this position; so it relates to a method of measuring a target depth and a metal detector using this method, which allow calculation to be made independently of the type and practical the size of the metal.

6 Claims, 5 Drawing Sheets



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