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DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Nessim et at.

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(54) AIRCRAFT RESCUE SYSTEMS AND METHODS USING PREDICTIVE MODELS

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CPC *GO8G 5/0056* (2013.01); *B64C 39/02* (2013.01); *B64C 2201/021* (2013.01); *B64C 2201/12* (2013.01)

(58) Field **of Classification Search**

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See application file for complete search history.

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(57) **ABSTRACT**

Systems and methods for determining object location may include a memory and a processor. The processor may be configured to collect seismic data and geophysical data to determine object location. The processor may be configured to determine one or more seismic attributes associated with a plurality types of noises based on the seismic data and the geophysical data using one or more machine learning algorithms. The processor may be configured to eliminate unwanted noises from noise classifications based on the one or more seismic attributes. The processor may be configured to predict the object location by comparing time and velocity data of the object with recorded timing and velocity data. The processor may be configured to validate the object location by comparing the determined noise with image data. The systems and methods may be used in, for example, detecting missing planes such as Malaysian Airlines Flight **370.**

23 Claims, 12 Drawing Sheets