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Atkinson et al.

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(54) **SYSTEMS AND METHODS FOR CREATING MAPS USING GPS SYSTEMS**

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(58) **Field of Search** 701/207, 208,
701/213, 214, 217; 342/357.06, 357.08,
357.12, 357.14, 357.02; 702/94, 95, 197

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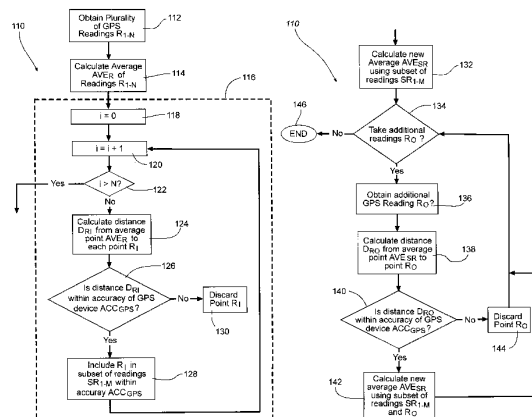
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(57) **ABSTRACT**

A system and method for calculating and storing the location of objects. The system includes a computing device, a global positioning system (GPS) receiver in communication with the computing device, and a range finder in communication with the computing device. The GPS receiver obtains a latitude location and a longitude location of a first position and stores them in the computing device. Next, the GPS receiver obtains a latitude location and a longitude location of a second position and stores them in the computing device. A range finder is then used to locate a distance from the second position to a third position, which is stored in the computing device. The third position is the position of the object for which a location reading is sought. To calculate the latitude and longitude location of the third position, the computing device calculates an azimuth for the third position using the first and second position locations stored in the computing device. Next, the computing device calculates the latitude location and the longitude location of the third position using the latitude location and longitude location of the second position, the distance from the second position to the third position, and the previously calculated azimuth.

30 Claims, 18 Drawing Sheets



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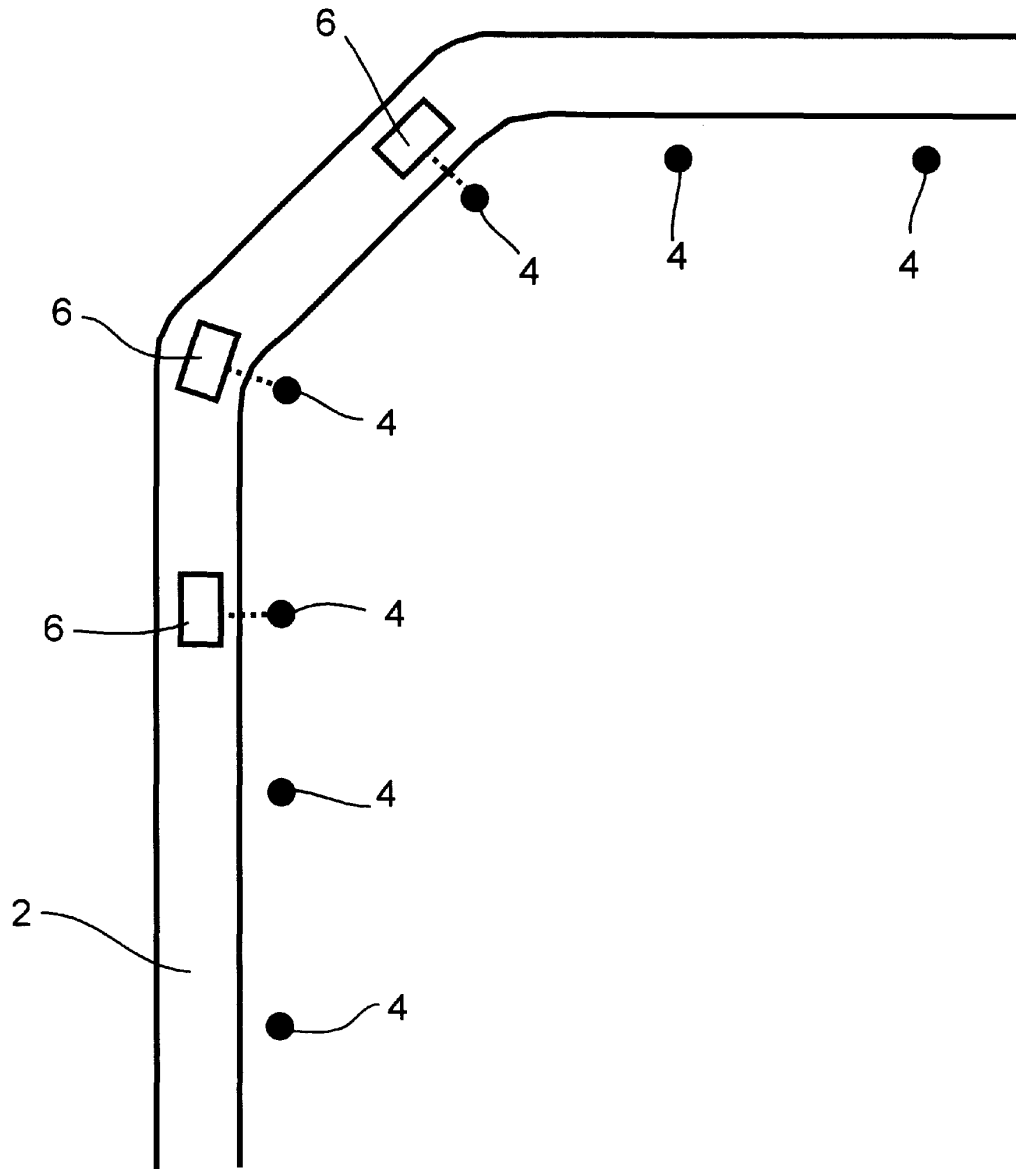


Fig. 1

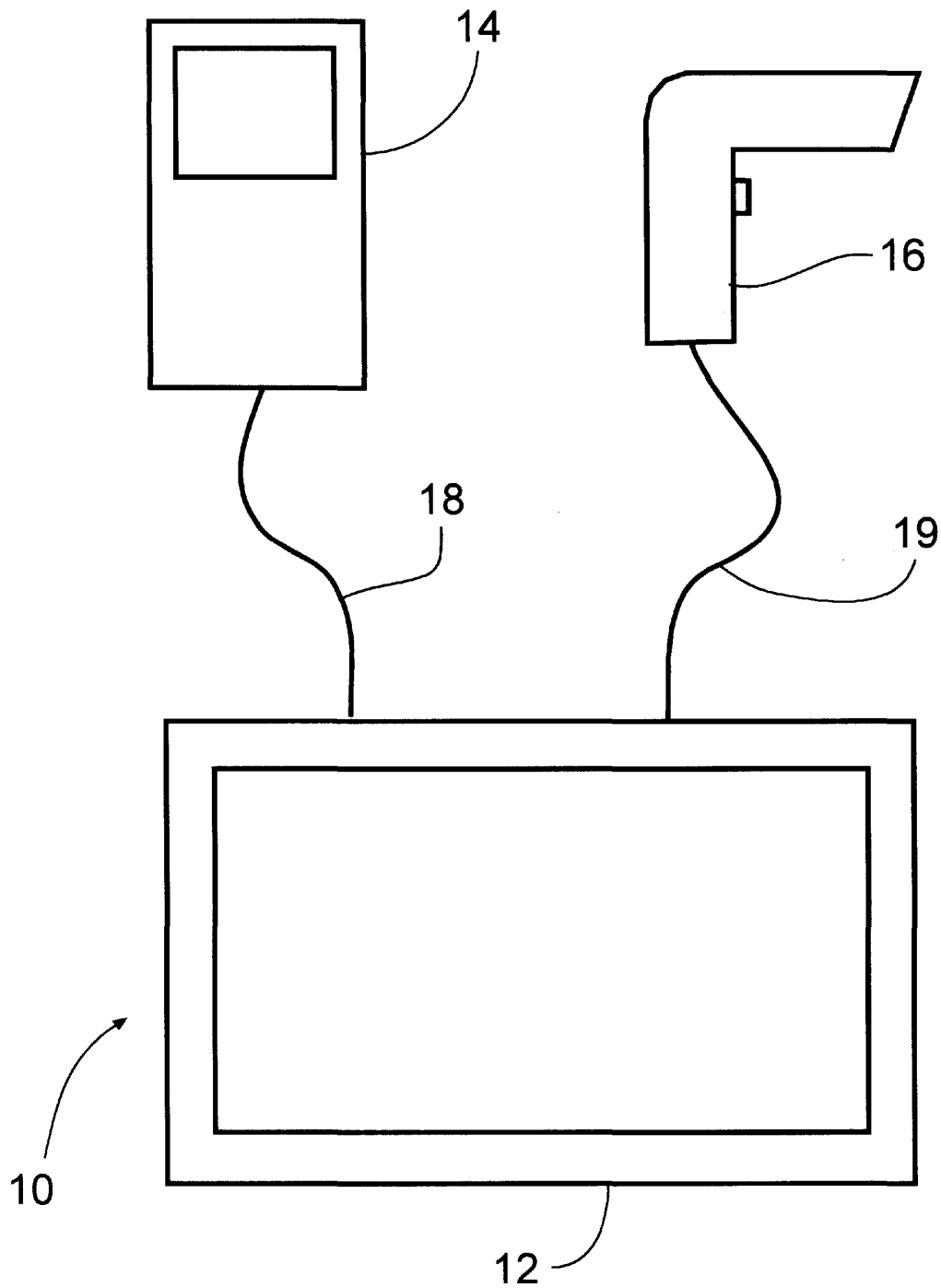


Fig. 2

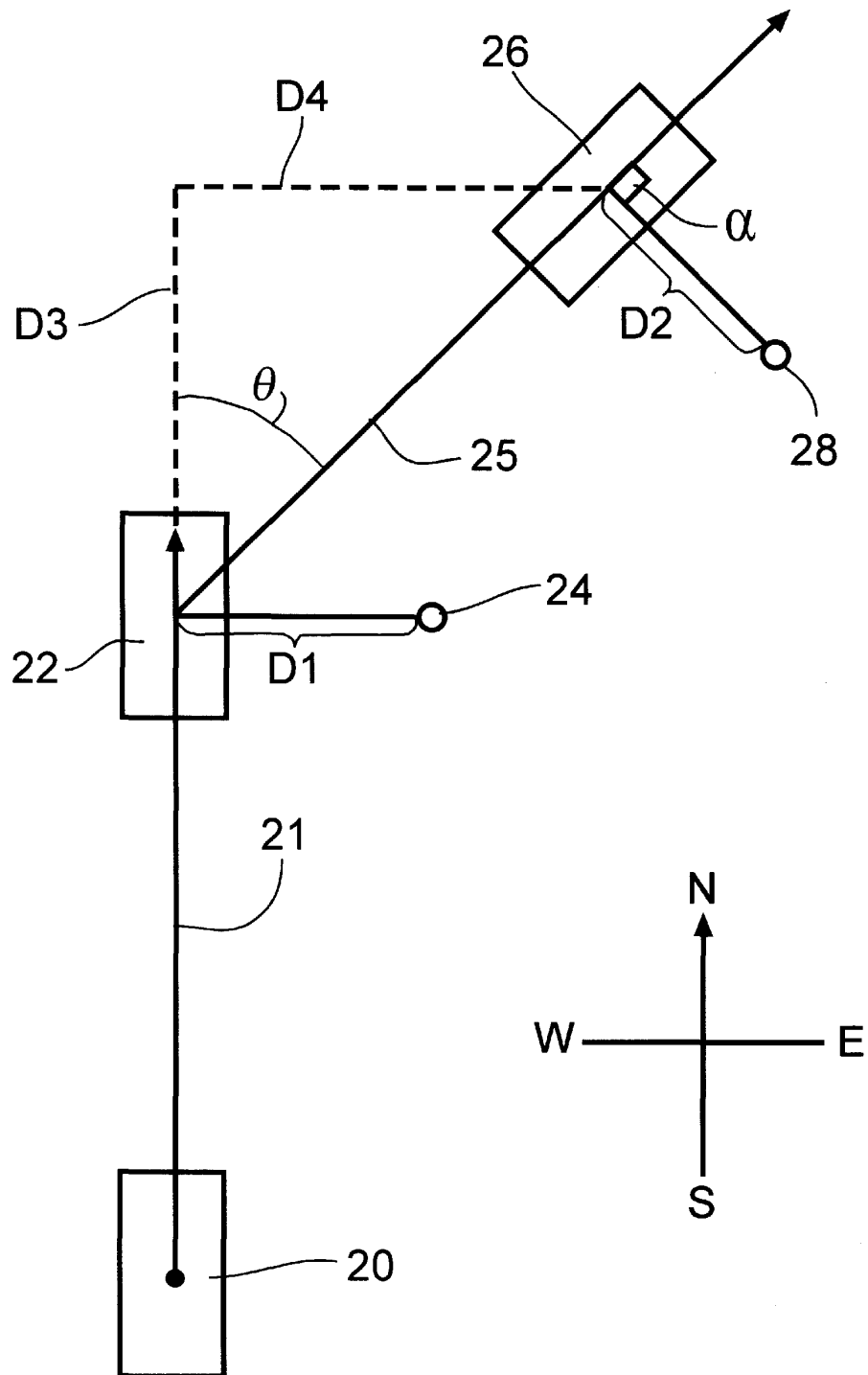


Fig. 3

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