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Hart

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(54) **E H ANTENNA**

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(58) **Field of Search** 343/773, 774, 343/822, 852, 860, 808, 840, 859, 821, 807; H01Q 1/50, 9/24

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(57) **ABSTRACT**

In an antenna system for transmitting and receiving, in association with a radio device, electromagnetic radiation has an E-field component and an H-field component. The electromagnetic radiation corresponds to a radio frequency power signal having a current and a voltage at a radio frequency. The antenna system includes a first radiating element and a second radiating element, each comprising a conductive material. The second radiating element is spaced apart from, and in alignment with, the first radiating element. A phasing and matching network is in electrical communication with the first radiating element, the second radiating element and the radio device. The phasing and matching network aligns the relative phase between the current and the voltage of the radio frequency power signal so that the H-field component of the corresponding electromagnetic signal is nominally in time phase with the E-field component.

19 Claims, 2 Drawing Sheets

