



United States Patent [19]

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Lynt et al.

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[54] **APPARATUS FOR CONVERTING VISUAL IMAGES INTO TACTILE REPRESENTATIONS FOR USE BY A PERSON WHO IS VISUALLY IMPAIRED**

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[57] **ABSTRACT**

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A device for converting the visual and/or auditory into tactile representations includes imaging equipment for converting light and/or sounds, including spoken text, into electrical signals, processing equipment for processing the electrical signals, and a tactile display for converting processed electrical signals into tactile images. The tactile images are felt by the user enabling them to obtain visual or auditory information by touch about the world around them that would otherwise be obtained through vision and/or hearing.

[51] **Int. Cl.⁶** **H04N 1/00; G09B 21/00**
[52] **U.S. Cl.** **358/471; 434/114; 345/31; 345/108; 345/110; 348/62; 340/825.19; 340/407.2**

[58] **Field of Search** **358/471; 434/113, 434/114; 345/31, 108, 110; 348/62; 340/407.1, 407.2, 825.19; 341/21**

[56] **References Cited**

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16 Claims, 6 Drawing Sheets

