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Davis et al.

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[54] COMMUNICATIONS HEADSET WITH UNIVERSALLY ADAPTABLE RECEIVER AND VOICE TRANSMITTER

5,381,486	1/1995	Ludeke et al.	381/187
5,414,769	5/1995	Gathey et al.	379/430
5,446,788	8/1995	Lucey et al.	379/430
5,448,646	9/1995	Lucey et al.	381/74
5,450,496	9/1995	Burris et al.	381/183
5,469,505	11/1995	Gathey et al.	379/430
5,533,122	7/1996	Gathey et al.	379/430

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FOREIGN PATENT DOCUMENTS

[73] Assignee: **Plantronics, Inc.**, Santa Cruz, Calif.

3210034 A1	3/1982	Germany
93 13 223.9	4/1993	Germany

[21] Appl. No.: **658,838**

Primary Examiner—Jack Chiang
Attorney, Agent, or Firm—Fenwick & West LLP

[22] Filed: **May 31, 1996**

[57] ABSTRACT

[51] **Int. Cl.⁶** **H04M 1/00**; H04R 25/00
 [52] **U.S. Cl.** **379/430**; 381/183; 381/187
 [58] **Field of Search** 379/430, 428, 379/433; 381/183, 187, 68.5, 68.6, 68.7, 69

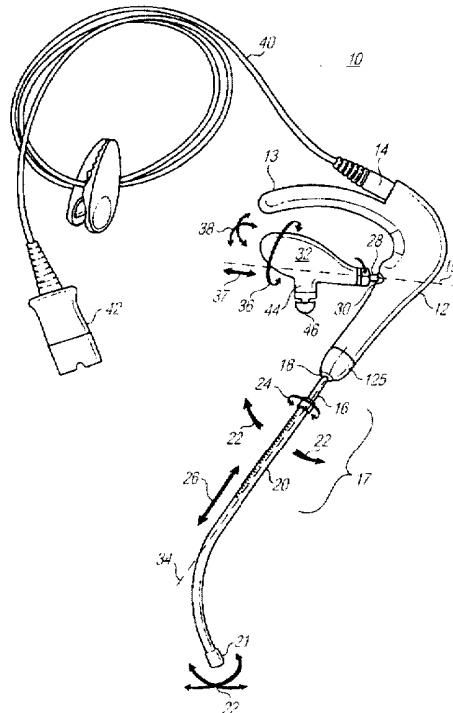
A communications headset includes a headset enclosure and a receiver enclosure coupled thereto by various means allowing displacement of the receiver enclosure with respect to the headset enclosure at any of a variety of angles, rotations, and distances. The adaptable positioning of the receiver enclosure allows the headset to be used by a wide variety of users having different ear shapes and sizes, while providing a stable, comfortable fit and ensuring good acoustic performance. In one embodiment the receiver enclosure is slidably coupled to a ball tube having a ball that rests in a socket of the headset enclosure. The receiver enclosure can telescope along the length of the ball tube and can rotate about an axis of the tube. The ball can be rotated in the socket to position the receiver enclosure at any of a variety of angles relative to the headset enclosure. A voice transmitter is also coupled to the headset enclosure so as to allow adjustment of length, angular position, and rotation.

[56] References Cited

U.S. PATENT DOCUMENTS

D. 375,959	11/1996	Davis et al.	D14/223
2,485,405	10/1949	Olney et al.	179/102
3,440,365	4/1969	Bryant et al.	179/156
3,610,841	10/1971	Hutchings	179/156
4,335,281	6/1982	Scott et al.	179/156
4,429,194	1/1984	Kamon et al.	179/182
4,617,431	10/1986	Scott et al.	179/156
4,893,344	1/1990	Trägardh et al.	381/187
4,917,504	4/1990	Scott et al.	381/187
5,210,792	5/1993	Kajihara	379/430
5,345,509	9/1994	Hofer et al.	381/68.6

6 Claims, 9 Drawing Sheets



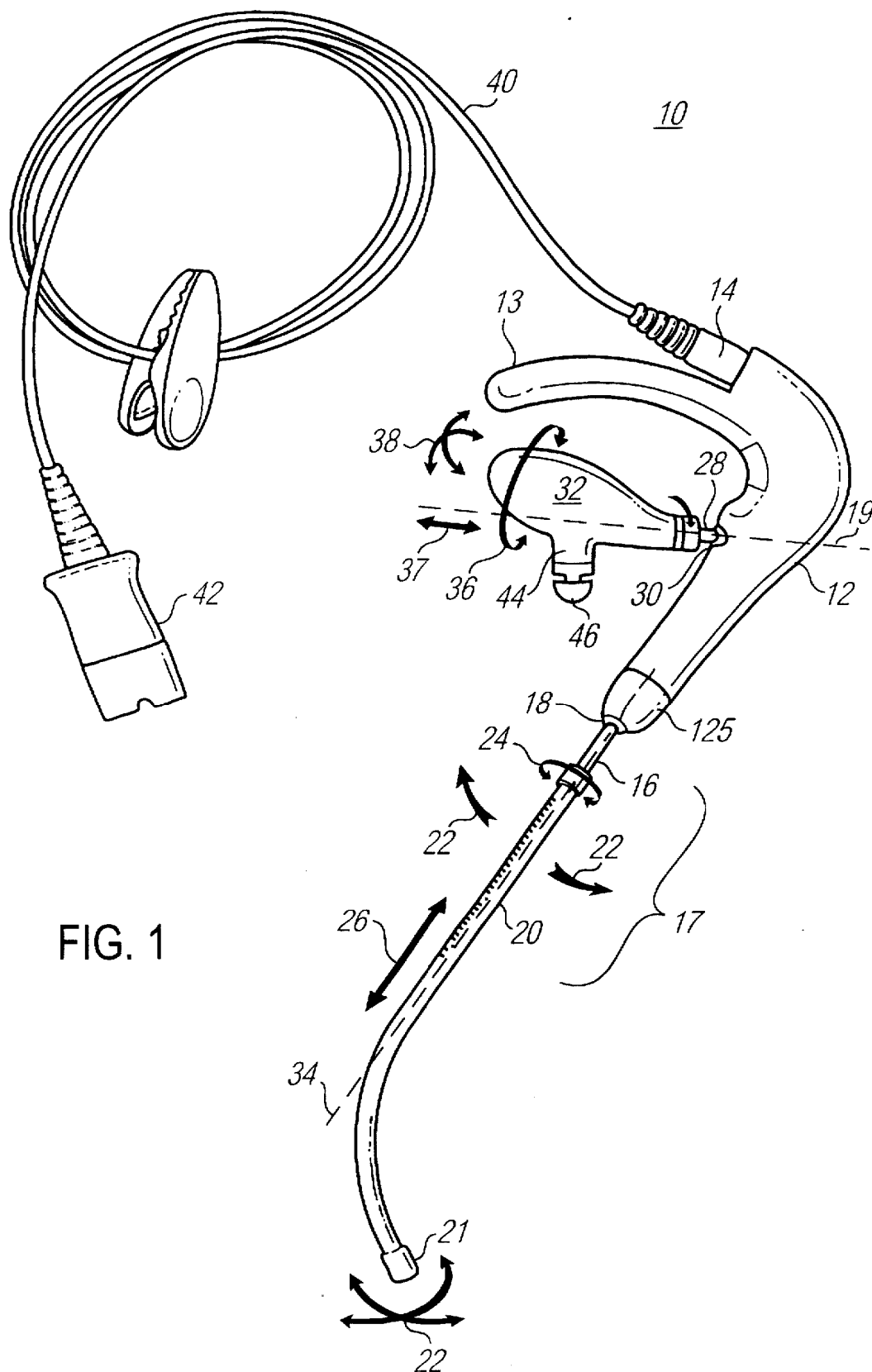
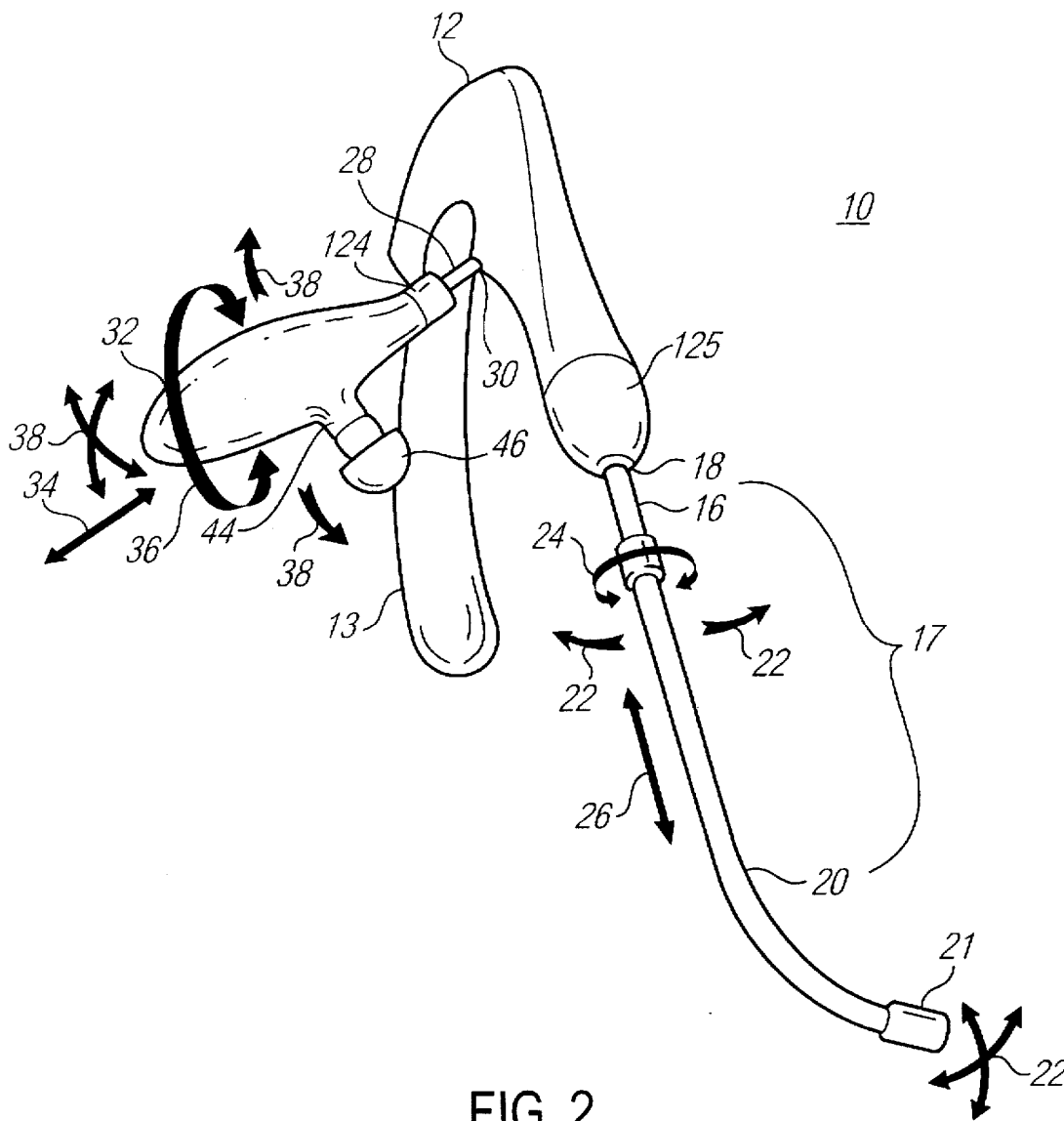


FIG. 1



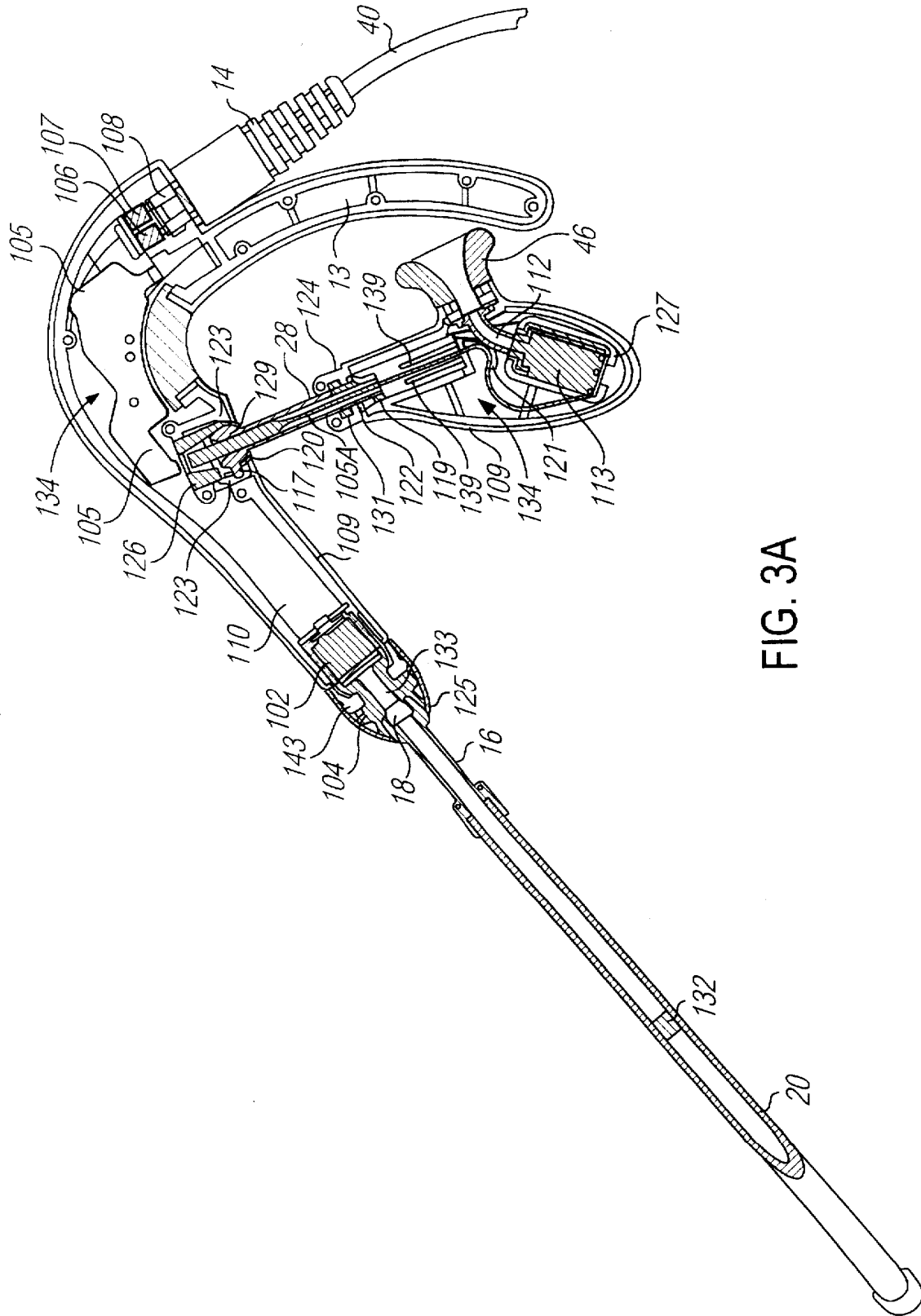


FIG. 3A

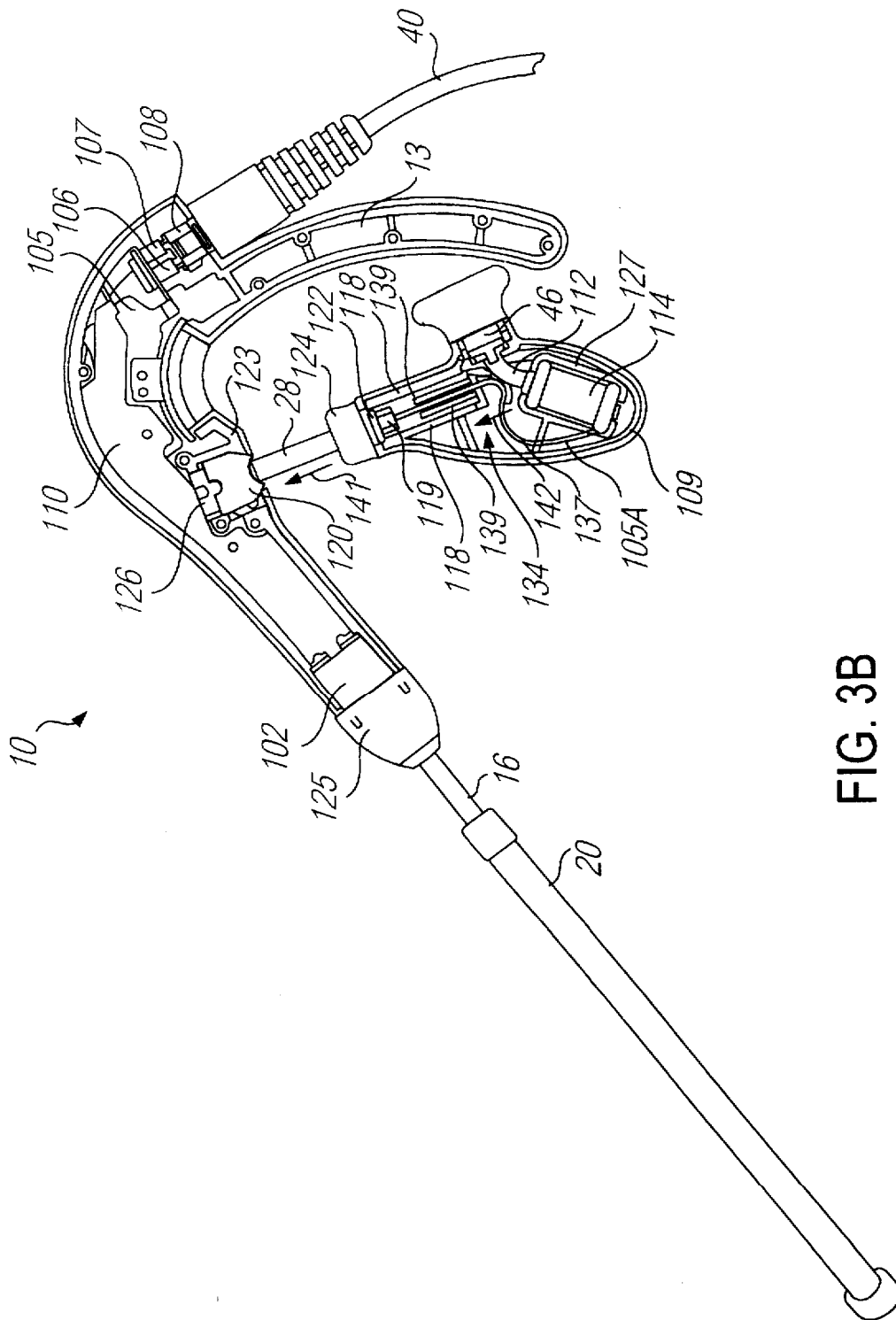


FIG. 3B

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