

[54] **SYSTEM AND METHOD FOR EVALUATING NEUROLOGICAL FUNCTION CONTROLLING MUSCULAR MOVEMENTS**

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[52] **U.S. Cl.** ..... 128/741; 128/643; 128/774; 128/782

[58] **Field of Search** ..... 128/639, 640, 643, 733-734, 128/741, 744, 774, 777, 782; 73/514; 324/162

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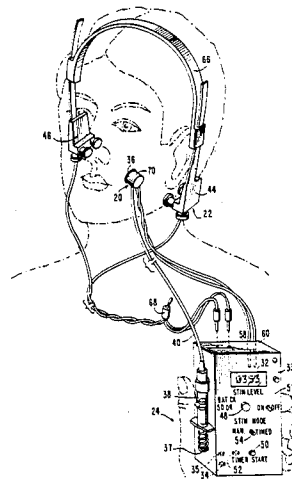
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[57] **ABSTRACT**

A system for evaluating nervous system function of a subject including generally an accelerometer sensor, a stimulus electrode assembly, and a portable device to which the sensor and electrode assembly are connected. The sensor measures the magnitude of the (stimulus evoked) movement of a body part of the subject along at least one axis of three dimensional space. The device contains electrical circuits for processing data from the sensor, generating stimuli to the electrode assembly, and timing both the extraction of sensor information and the delivery of stimuli. The sensor has a suction chamber for attaching the sensor to the desired body part site by static suction. To evaluate the nervous system function the magnitude of the monitored sensed (acceleration) movement is compared with a control value. When the nervous system being evaluated is the peripheral nerve of one side of the face, the control value can be determined by evoking and measuring movement on the opposite side of the face. For this embodiment, two pairs of electrodes are attached to a headband which holds them simultaneously against opposite sides of the face and a switch communicates the desired pair with the portable device.

51 Claims, 6 Drawing Sheets



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FIG. 1.

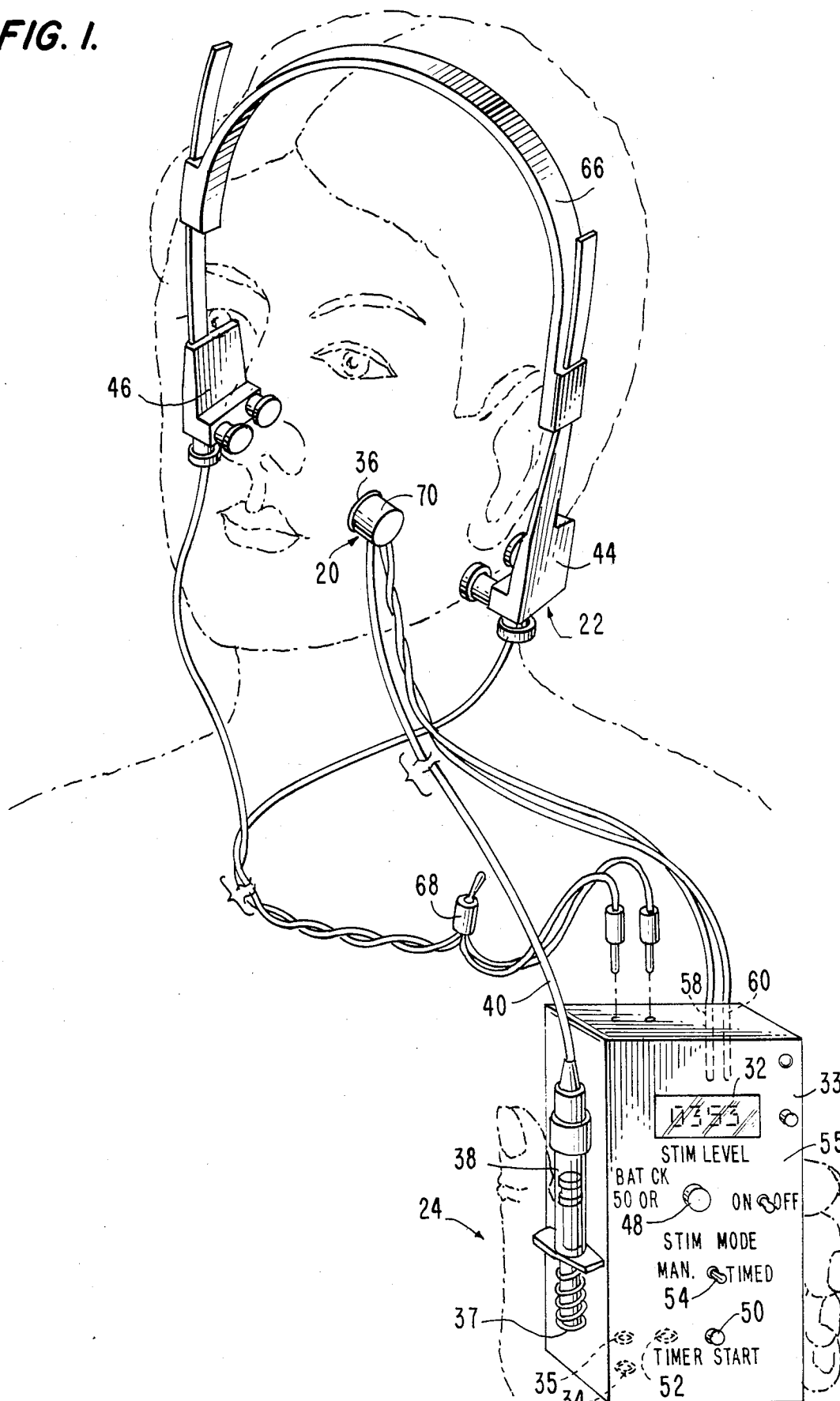


FIG. 2.

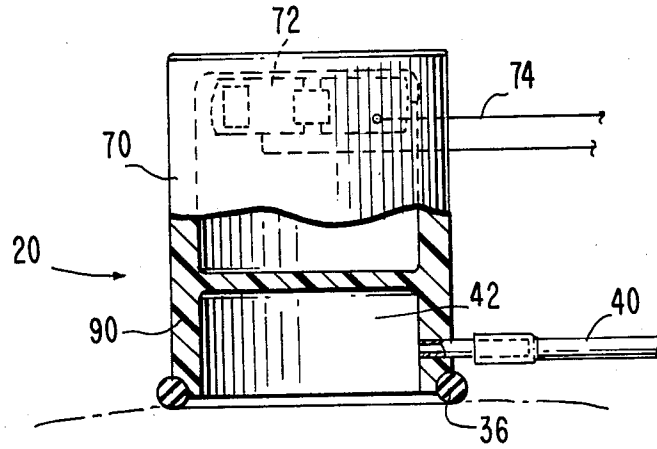


FIG. 3.

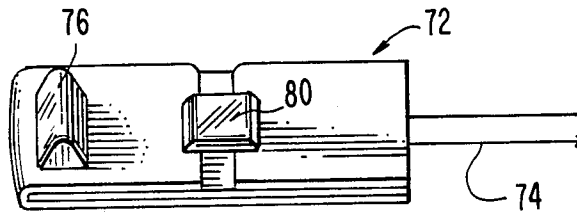


FIG. 4.

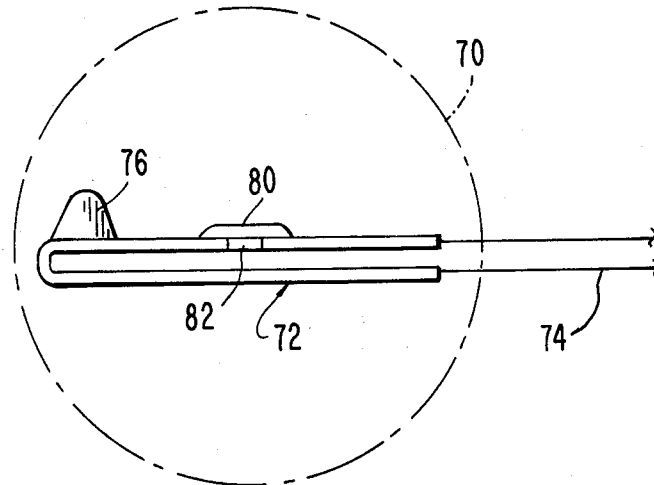


FIG. 5.

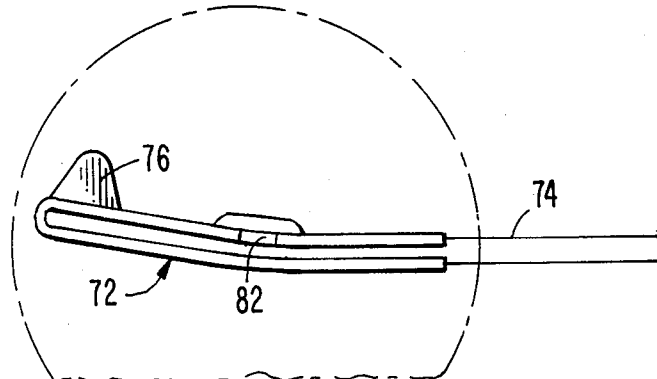
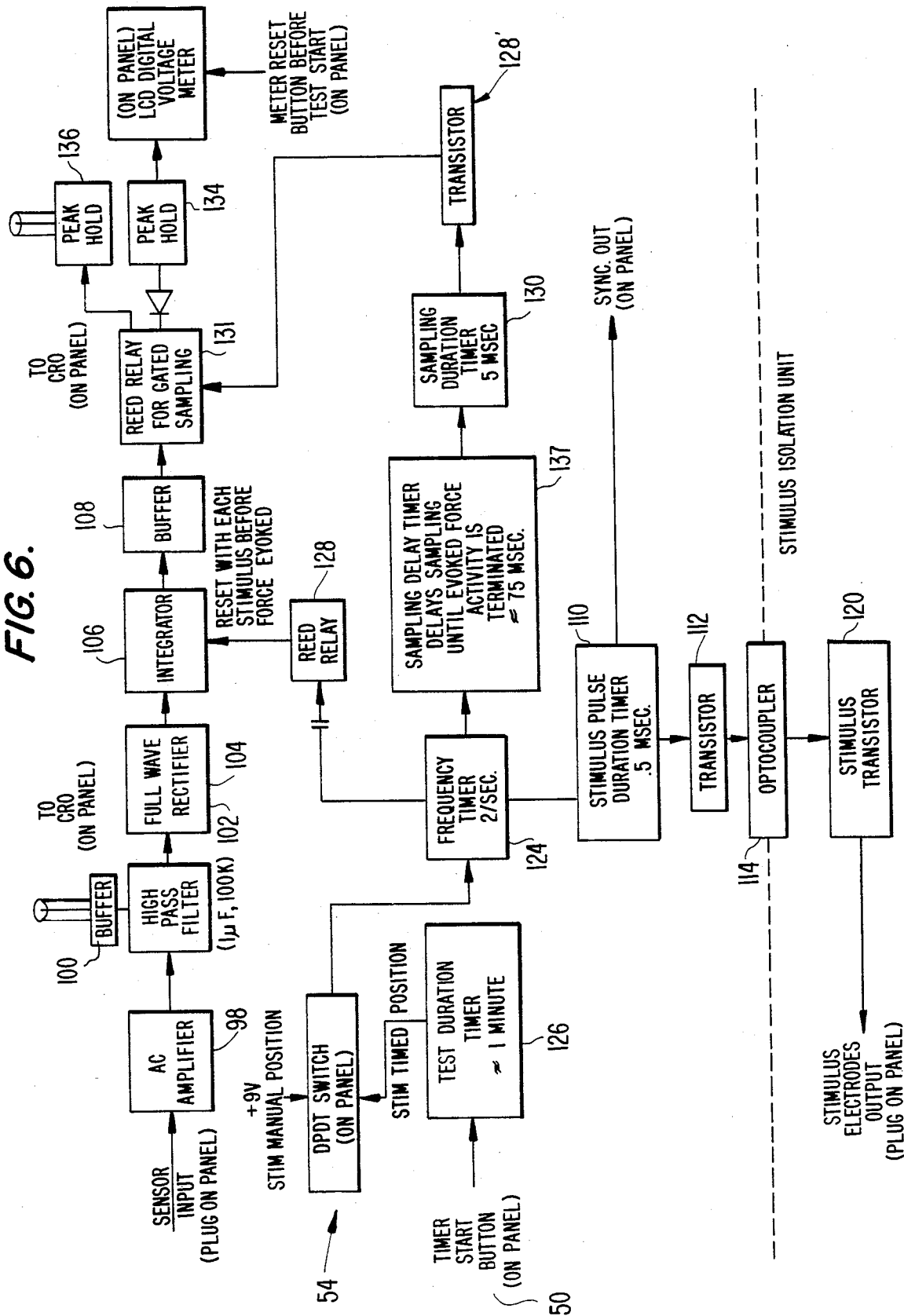


FIG. 6.



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