# United States Patent [19]

## Sakamoto et al.

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Oct. 10, 1989

# [54] CHARGING APPARATUS FOR AN ELECTRONIC DEVICE

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Japan

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Japan

[21] Appl. No.: 216,914

[22] Filed: Jul. 7, 1988

## [30] Foreign Application Priority Data

Jul. 10, 1	987	լյբյ	Japan	62	·106457[U
Jul. 15, 1	987	[JP]	Japan		62-176399
Jul. 15, 1	987	[JP]	Japan		62-176400
Jul. 15, 1	987	[JP]	Japan		62-176401

[51]	Int. Cl.4	 G04C	10/04;	H01M	10/44
[50]	TTO O		20	0 /404.	220 /2.

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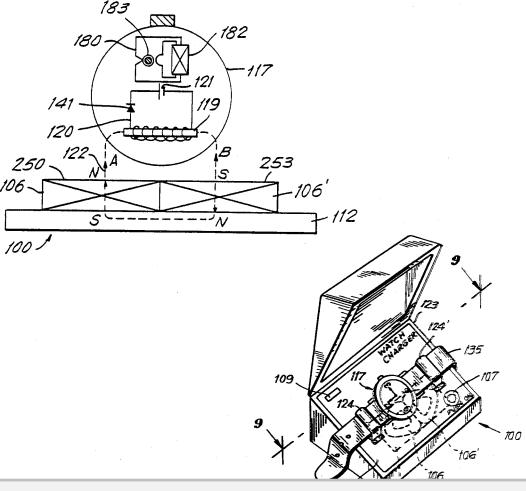
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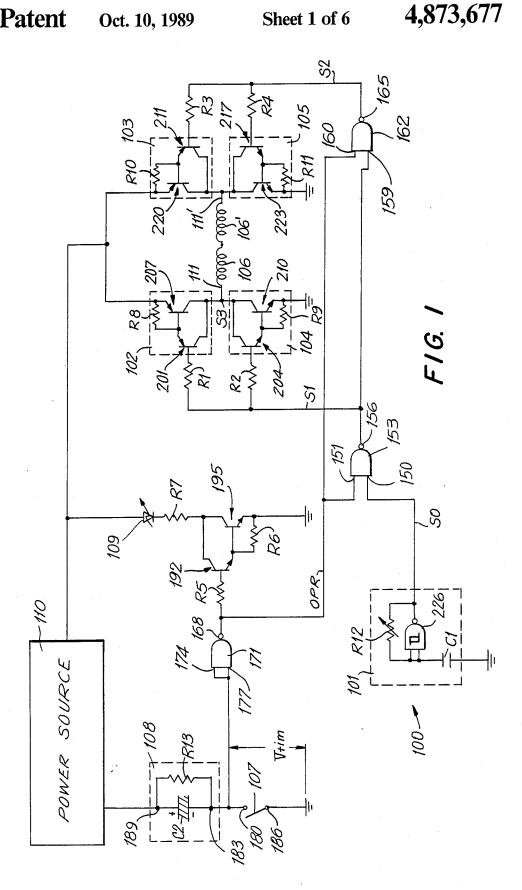
Primary Examiner—Vit W. Miska Attorney, Agent, or Firm—Blum Kaplan

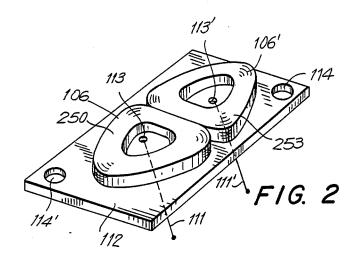
### [57] ABSTRACT

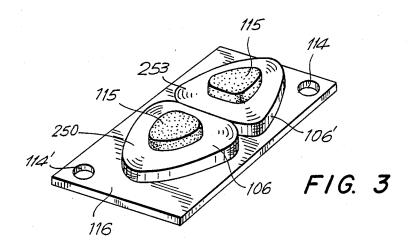
An apparatus for charging a power storage device provided within an electronic device. A power source provides direct current which is alternated in direction through a pair of primary coils for inducing alternating current in a secondary coil of the electronic device. The pair of primary coils are fixed to a coil yoke all of which are supported within a casing of the apparatus. During charging of the power storage device, the electronic device is mounted to the outside surface of the casing whereby substantially all of the magnetic flux of the magnetic field produced by the pair of primary coils flows through the secondary coil and coil yoke. The frequency of the oscillating signal is preset to provide the maximum induced current which will not adversely affect the movement of the analog mechanisms within the electronic device.

### 36 Claims, 6 Drawing Sheets



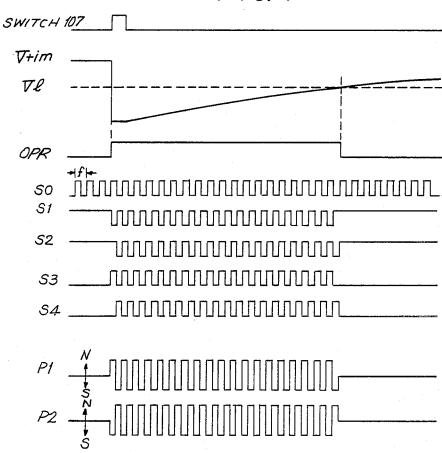


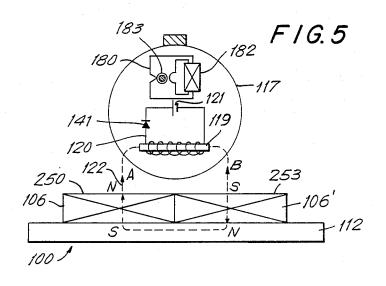




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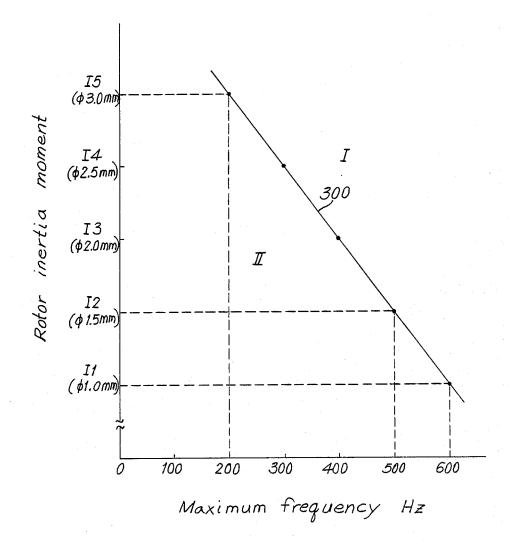






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